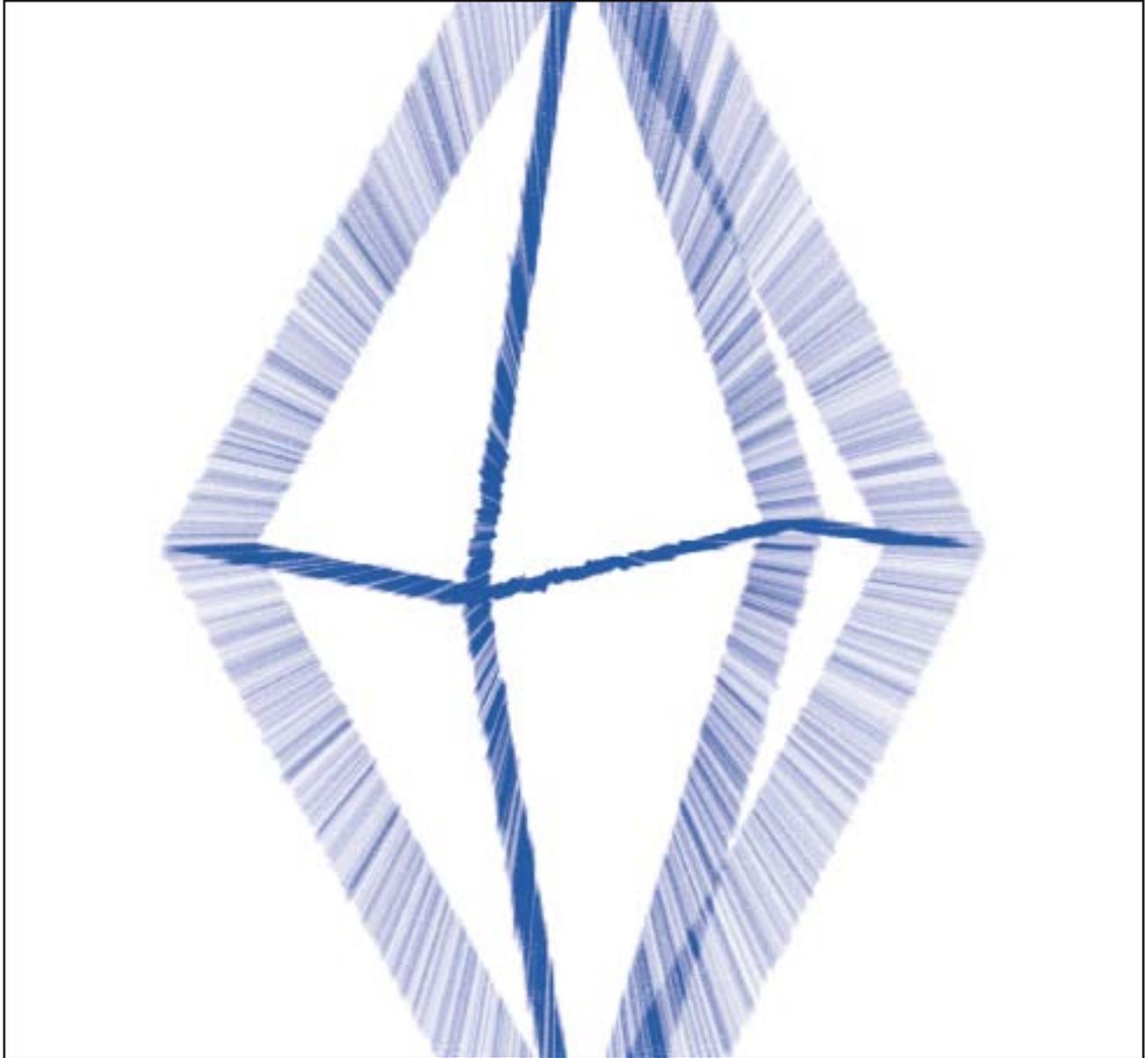


# The Russell Society Newsletter



*Number 73*  
*September 2018*

The Russell Society is a society of amateur and professional mineralogists which encourages the study, recording and conservation of mineralogical sites and material.

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# The Russell Society Website www.russellsoc.org

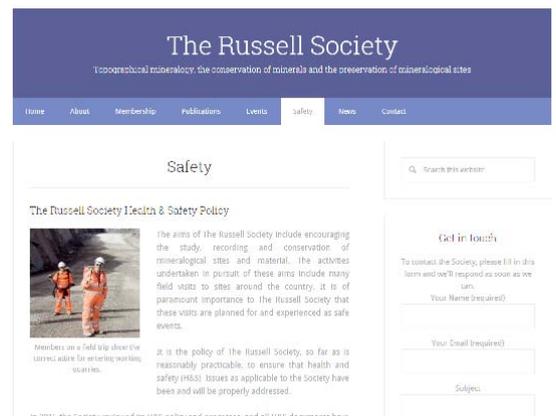
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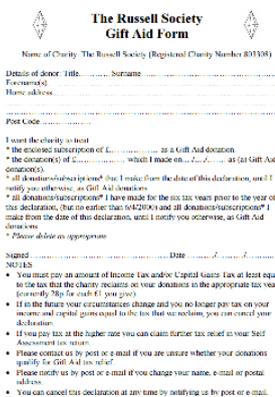
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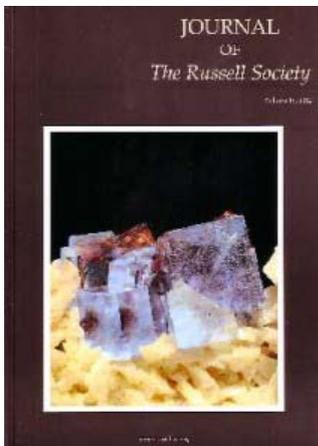
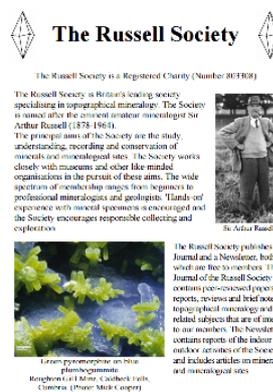
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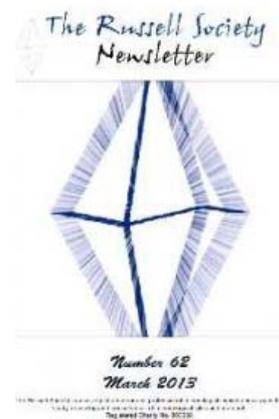
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Clicks!



The Russell Society Website has been changed & updated. Be sure to check it out!

# Russell Society Newsletter

## Number 73 September 2018

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## The Russell Society Health and Safety Policy:

Adopted by Council 2015.

- It is the policy of the Russell Society, so far as is reasonably practicable, to ensure that health and safety issues as applicable to the Society have been and will be properly addressed.
- All members of the Society are to take reasonable steps for the H&S of themselves and others who may be affected by their acts or omissions.
- All members of the Society are to co-operate with the Society, so far as is reasonably practicable, to enable the Society to comply with any duty or requirement imposed on it.
- In the event of an accident or injury members of the Society should seek the appropriate medical attention and notify Society officials who will properly document all details.
- Any member of the Society can bring to the attention of Society officials any suggestions or ideas which could improve safety and prevent accidents.

One of the aims of the Russell Society is to encourage the study, recording and conservation of mineralogical sites and material. Among the various activities undertaken in pursuit of this aim, members make many field visits to sites around the country and attend many lectures and other indoor meetings. The Russell Society promotes a high degree of responsibility amongst its members in the achievement of its aims, especially with regard to Health and Safety (H&S) matters.

It has            A Health and Safety Policy  
                  A Risk Assessment Form  
                  A Guide to Good Practice

A Field Leaders Indemnity Form  
An Incident Report Form  
A Field Visit Check List

These documents are to encourage enjoyable and interesting visits and meetings that are educational, involve conservation and recording, and are incident free. They also show the responsible attitude that the Russell Society and its members have to health and safety issues.

The Society holds Public Liability Insurance with a limit of Indemnity of £5,000,000 (extended to include Member to Member) and Personal Accident Insurance with Aviva *via* Bluefin Insurance Services Ltd. under policy No. 19133855

### H&S Review 2015

The views and opinions expressed in this Newsletter are those of its correspondents, and are not necessarily agreed with or shared by the Editors, the Council, the Russell Society or its Members. The accuracy of submissions is the responsibility of the authors or Society branches and will not necessarily be checked by the Editor for validity.

**“Editorial”:**

Welcome to another edition of the Russell Society Newsletter. The seasons roll around and, at the end of a long hot summer, we are moving once more into that period where field collecting tends to tail off and thoughts turn to sorting out all that stuff we've brought home – and to attending the autumn mineral shows. There has clearly been a very active collecting programme over the last few months. I have received a large number of field trip reports describing all manner of interesting finds. So many, in fact, that I have had to hold one or two of them over to the next issue to prevent this one becoming too large. If you have written a report and don't see it here - don't worry, it will be in the next issue.

On the subject of mineral shows - I hope that as many of you as can will be supporting the upcoming UK events, not just the larger shows at Bakewell (October) and Haywards Heath (November) but also some of the smaller local events over the next few months. Details of some of these can be found in the centre pages of this issue. They all deserve your support and without it they will not thrive and may eventually disappear.

The “Visits & Events” insert provides a good selection of trips, meetings and other events to occupy you over the winter months. However, I know that some Branches are finding it increasingly difficult to attract audiences and, in consequence, feel it is difficult to justify engaging speakers or arranging other events. It's a classic case of “use it or lose it” and you should remember that the principle applies to just about everything the Society does.

I was in France in June and visited the huge mineral and gem fair at St Marie aux Mines – the second largest in Europe after Munich - which is always a great experience. Although it's so far away, St Marie offers so many attractions; a wonderful location, fine food and wine, the chance to see a huge array of minerals (including some of the finest existing examples of many species), and the probability that you will meet a veritable “who's who” of the European mineral collecting community. It made me think about what causes people to visit mineral shows (or not) and what they expect from the experience. This, alongside a thought-provoking editorial in the French mineral magazine *Le Règne Minéral*, prompted me to insert a note in the following pages asking what floats your boat in terms of mineral shows. I would be interested to hear some views.

You will also find a couple of items relating to the Society's ASMs. There is a summary of the minutes of last year's annual general meeting, held as part of the ASM weekend in Leicester, and also initial information on next year's event which will be held in the conference centre at Buckfast Abbey in Devon. I hope you will all give real consideration to attending. I know I have a distressing tendency to bang on about how good the ASM weekends are, but this promises to be a great addition to the long list of excellent ASM get togethers. I look forward to seeing many of you there.

Something else to look forward to. A new British mineralogy book does not come along very often, but I understand that Roy Starkey's “Minerals of the English Midlands” will be with us very soon. For the latest information on availability please check Roy's website [www.britishmineralogy.com](http://www.britishmineralogy.com) and click on the Minerals of the English Midlands (new book) tab. This promises to be a substantial read, weighing in at about 400 pages, and with more than 900 illustrations.

I shall, as usual, be sending out this Newsletter in both paper and pdf versions. However, this time – and for the first time – a number of UK members will receive only the pdf version. They responded to my request in the last issue for people willing to go paperless to assist the Society in reducing its costs. I hope that they enjoy their chosen format and I would like to request (once again) that others among you consider the advantages of going this route. There will definitely come a time when the Society only produces a pdf Newsletter – and this may be sooner rather than later.

Finally, I am happy to report that we have identified a potential successor to me as editor of the Newsletter. For various reasons the takeover cannot happen for a while but it seems likely that, over the coming year the reins will pass to a new and safe pair of hands.

Enjoy your Newsletter.

**Michael Doel**

## **From the President:**

Hello to all members. When I originally wrote this, we were in something of a heatwave and England were on the verge of World Cup victory. Thankfully, I did not buy the T-shirt! Whilst the greater populace thinks 'sun tan' or 'barbecue', the mineral collector thinks slightly differently - perfect weather for those localities where a slightly lower water table helps.

Some of you already know me but many of you won't so perhaps a potted history of your new President might help? I am a landscape architect by profession, a jack of all trades and master of none. Having elected to take three sciences at A-Level the subsequent results remain a clear indication that I will never be a 'scientist' or a 'mineralogist' as such, but I won't let that get in the way of enjoying minerals. I live in Yorkshire and spend most of my spare time collecting locally or getting out on Society field trips. As I only collect minerals from the British Isles, being in the Russell Society is a natural fit for me. I vaguely recall that my relationship (and that is, I think, how my wife sees it ...) with the Society began with reading an old copy of our Journal. I'm very glad this encounter occurred and am delighted to be able to help the Society by acting as your President.

My first task (pleasure) is to thank Christine Critchley for taking on the role of Acting President last year, in addition to her Vice President and Branch duties. This is much appreciated by myself and Council. Christine is a great friend to the Society and has always been there to help when needed. On behalf of Council, I also thank Rob Bowell for his stint as Treasurer, a tough role to carry out and more so when work has taken him to all parts of the globe over the past couple of years. I am delighted to welcome Roy Starkey back onto Council as General Secretary and Mary Starkey as Treasurer. If anyone can keep me on the straight and narrow it will be Roy and Mary! Our Newsletter and Journal continue to be excellent publications, due entirely to the hard work of their respective editors, manager, editorial board, proof readers, and, of course, contributors. None of us should underestimate how much effort is put into making these publications happen and should look to contribute to them in the best way that we can. I'd also like to say thanks for the continuing hard work of our Branch committees and field trip leaders. It is often difficult to arrange field trips yet we still maintain good relationships with many working quarries across the UK. Some leaders have developed good relations with Natural England, Historic England and even private estates that have been wary of mineral collectors in the past, allowing us to visit protected or previously inaccessible sites. From the species and finds that have been reported in our publications over the past few years it is clear to me that the Society continues to make a significant ongoing contribution to the recording and understanding of British mineralogy. Far from the doom and gloom I sometimes hear about the 'lack of localities' or 'lack of minerals' our people are showing that with effort, determination and some persuasion, new opportunities are being opened up.

It was good to see several new faces on field trips this year. We have a large number of members who don't go on field trips and I would encourage those who are able to participate to join in. Not every trip produces specimens but most do and it is always interesting to look around quarries and other sites, as well as enjoying the social side of the visits.

Moving on to Constitutional matters, those of you involved with our Branches will be aware of proposed changes. Declining interest in filling Branch committee positions has led to the closure and amalgamation of several Branches. We need a more flexible system at the local level that meets our current needs. Council is therefore proposing to replace Branches with 'Regional Groups' with the dual aims of reducing bureaucracy and focusing on the essential parts of the Branch system – the field trips and hosting the ASM weekend. You will hear more about this in the run up to the 2019 AGM, at which there will be a vote on the proposals.

Looking at the wider subject of British mineralogy I would strongly recommend that those of you with online access look at, or join, the Collectors of British Minerals and British Micromount Society groups on Facebook. There are some good discussions, knowledgeable collectors, reports of new finds and plenty of photographs of British minerals. One of the main contributors to both sites, Steve Rust, is publishing a book on Frongoch minerals this year, it promises to be a real treat. As mentioned in the Editor's notes, another mouth-watering publication due to hit the shelves this year is Roy Starkey's book, "Minerals of the English Midlands", Christmas is coming early in 2018 .....

I hope everyone is looking forward to our 2019 ASM, to be hosted by Southern Branch at Buckfast Abbey. Apart from the (somewhat lethal) tonic wine and the glorious Devon setting there will be lots of interesting things about minerals too. If you've never been to an ASM weekend you really should give it a try, you will be made to feel welcome and I'm sure you will have an enjoyable time.

Finally, if anyone has anything they wish to raise with Council or discuss with me please feel free to give me a call on 0774 8678669 or e-mail me at [steve.warren@estellwarren.co.uk](mailto:steve.warren@estellwarren.co.uk).

**Steve Warren**

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**SOCIETY NOTICES**

**PAMELA ANN MORETON (1946-2018)**



Pam was born in Peterborough in March 1946 and moved first to Stamford and then to Leicester with her father's work.

She attended Kibworth Grammar School, enjoyed all sports and managed to master the violin in the school orchestra. On leaving school she went on to do a secretarial course at college, afterwards taking a job at the Leicestershire Fire Service Headquarters. During her time there she joined the Auxiliary Fire Service as a volunteer and became a Leading Firewoman, enjoying the close comradeship of this service, she drove a 5 ton "Green Goddess" and spent time on many courses on fire and safety operations.

Pam moved on to do temp work, and it was during her time at quarry engineers Parker Plant in Leicester that she met Nigel who was then employed as a technical illustrator.

They married in 1972. Both Pam and Nigel loved the outdoors and during a walk in the Lake District in 1968 they were introduced to mineral collecting by someone they met - later discovering that it was mineral dealer Dick Barstow. Following this both Pam and Nigel joined the newly formed Russell Society. At this time Pam worked at the then Leicester Polytechnic, working with the Industrial Liaison Officer. Following a gap raising a family, including twin boys, Pam went back to work in the Physics Department of Leicester University as Departmental Secretary working on a range of scientific and technical papers. A move back to the newly-named De Montfort University saw her holding the post, prior to retirement, of School Manager of the School of Built Environment.

It was during her time here that she studied and gained a BA and went on to do a MBA, always pushing herself to achieve more.

The Russell Society was a very important part of Pam's life. Being one of its original members, she shared the close friendship and enthusiasm for the subject and was fascinated by the many mineral forms and habits. Although one of the Society's "backbenchers" she was always keen to be involved in many of its activities - attending all the AGMs and serving for a brief period on the committee. Pam always looked upon the Society as an extended family of friends, all sharing a common interest.

Pam loved to travel and joined Nigel on many of his business trips including Malaysia and China. Holidays were usually centred around the world's classic collecting sites, travelling across Australia visiting Broken Hill, Coober Pedy, and the goldfields around Kalgoorlie, together with the townships and opal fields of Lightning Ridge and the sapphire areas of Queensland. Pam was equally happy donning a boiler suit to explore some wet and dirty old mine, or collecting minerals on isolated dumps in Scotland, the Lake District or Mid Wales.

With her sense of adventure travelling was always something Pam looked forward to with trips to Iceland, Australia, Canada and America. She also enjoyed roughing it when backpacking through Mexico, Turkey, Egypt, Namibia, Botswana and Zambia.

Besides her love of minerals, Pam enjoyed gardening with its variety of plants and had a love of books and reading.

Pam was justifiably proud of all the children's achievements. Lucy gained a BA in criminal justice and works within the police. Ben gained a masters degree and now resides in New Caledonia in the South Pacific, working as an environmental chemist and R and D manager. David gained his PhD and worked in Canada and the US as a geologist for over 15 years (so some of that early family mineral collecting must have had some influence); returning to the U.K. last year to see more of his mother.

We offer our condolences to her husband Nigel to whom she was married to for over 46 years, her daughter Lucy, sons Ben and David, her brother Tony, and all the seven grandchildren, some of which are building up mineral collections of their own. A lovely lady, always with a welcoming smile, that's how she will be remembered.

(Adapted from notes provided by Nigel Moreton)

### The 2019 Annual Society Meeting.

The Southern Branch have the pleasure of hosting the 2019 Annual Society Meeting (ASM) of the Russell Society. The meeting will be held in the grounds of Buckfast Abbey in Devon from Friday 12<sup>th</sup> April to Sunday 14<sup>th</sup> April 2019.

Buckfast Abbey is located in the Dart Valley, on the edge of Dartmoor National Park. This is only a couple of minutes from the A38 between Exeter and Plymouth, less than 30 minutes from Exeter and the M5. The location is stunning, access is straightforward and the costs are very reasonable making this a definite for all Russell Society members.



Northgate House, a fine location for a Russell Society meeting.

The Abbey grounds accommodate a number of businesses that include a Conference Centre and accommodation with its own restaurant that is called Northgate House. Our accommodation at Northgate House is around 100 m from the Conference Centre. The accommodation includes 31 double and twin ensuite rooms (includes 2 apartments) and 2 superior rooms. Society members and attendees will need to make their own booking arrangements, and a discount has been negotiated. In order to get the special accommodation rate attendees should ring on 01364 645630 and quote "The Russell Society".

The discounted rates, including breakfast are:

	Single Occupancy	Double Occupancy
Double or Twin Room	£71.10 per night	£80.10 per night
Superior Room	£91.10 per night	£107.10 per night

We have some good field trips planned for the Friday followed by evening dinner at the restaurant in Northgate House. After dinner there will be time for more drinks and socialising. Saturday at the Conference Centre will be a full day of presentations with plenty of time for members to socialise, view a range of mineral displays and make swaps. This will be followed by the AGM starting at 15.45. The topics already in the programme include presentations about minerals and sites in the Midlands and Devon and Cornwall, and displays are planned of minerals from Devon, the Midlands and the Mendips.



**The room for the Saturday presentations.**



**A typical double room in Northgate House.**

We will hold the ASM dinner on the Saturday evening at the restaurant in Northgate House, to be followed by the traditional auction to raise funds in support of the Society. More field trips will be on the program for the Sunday.

By the time you read this article, the Russell Society website will have an on-line booking form available together with full costs. The list of field trips on both the Friday and Sunday will be available (with potentially additional ones for those who want to stay longer) as well as the list of presentations and speakers on the Saturday. Attendees are invited to complete the booking form at the earliest opportunity to register attendance, select their menu choices and secure a place for their preferred field trip. An early response will help the organising committee greatly. In order to simplify organisation, the preferred method of payment will be by bank transfer (details will be specified on the booking form). For those who are unable to make an online payment, a cheque *via* post will also be acceptable.

The Southern Branch look forward to welcoming you to an amazing weekend of collecting and fascinating presentations on a wide range of British mineralogy. If you have any questions please contact Gary Morse.

The accommodation address is Northgate House, Buckfast Abbey, Grange Road, TQ11 0EG, Devon.

For more information about the conference centre please visit: <http://www.buckfastconferences.org.uk> and for the accommodation please visit: <http://buckfastaccommodation.org.uk/northgate-house>

**Chris Finch. S. Branch.**

### **The 2018 “Maisemore Event”.**

For a number of years now this event, jointly organised by the Cheltenham Mineral and Geological society and the Wales and West Branch of the Russell Society, has proved a popular attraction for members of both societies. Held in the Village Hall at Maisemore, a small village just northwest of Gloucester, this convivial event combines an interesting programme of talks with displays of minerals and fossils and offers opportunities for swapping, “give-aways” and extensive talking to a bunch of fellow enthusiasts and collectors.

This year’s event, which will be held on Sunday 21<sup>st</sup> of October and commencing at 10:00, will be no exception. The theme for the meeting is “Quartz” and there will be displays of quartz crystals from around the British Isles including one from Steve Warren, the new President of the Russell Society. The programme of talks will include “The Crystal Mines of Snowdonia” by Tom Cotterell. You are invited to bring along any of your own “problematic” rocks, minerals and fossils for identification.

Remember that address - Maisemore Village Hall, Gloucester, GL2 8JE – and put that date in your diary. Entry to the event is £5, with soup, salad, cake and refreshments included. It’s well worth a visit and you can contact Tom Cotterell at [tom.cotterell@museumwales.ac.uk](mailto:tom.cotterell@museumwales.ac.uk) for more details.

**Editor.**

## **Summary of the Russell Society Annual General Meeting, held at College Court Conference Centre, Leicester on Saturday 7<sup>th</sup> April 2018.**

Around fifty members attended this year's AGM, up on last year. The minutes of the 2017 AGM were accepted.

On behalf of all present, Christine, Acting President, thanked Central Branch members, notably Neil Hubbard, Frank Ince and Margaret Ince, for putting together the ASM weekend.

Christine was pleased to note upcoming changes to Council including Steve Warren as President, Mary Starkey as Treasurer and Roy Starkey as General Secretary. She thanked Rob Bowell for his time as Treasurer, noting the effort it must have taken to keep up with the role whilst working abroad so much. Upcoming changes to the Journal Editor role were also warmly welcomed, with David Green agreeing to work alongside Malcolm Southwood during 2018 with a view to taking over the role during 2019. Christine and all present note their appreciation and thanks to Malcolm for his time as Journal Editor (even though he hasn't quite gone yet!).

All present thanked Christine for taking on the role of Acting President over the past year, in addition to her continuing duties as Vice President.

In her Vice President role, Christine summarised field trip attendance in 2017: a total of 47 trips with a total of 325 person/visits. This is up from the previous year. Christine was pleased to report there had been no incidents on the field trips. She noted that latecomers were proving a nuisance on some trips and that being late should be the exception rather than the rule, please make sure you are there early or on time in future. In addition, for working quarries, if you are late and have not signed the Field Leader Indemnity Form (FLIF) you cannot enter the quarry. A reminder was provided about working safely in the field and Christine advised that FLIF documents have been updated to reflect GDPR image consent.

Steve Warren (General Secretary) advised that Council have been preparing for GDPR, including preparation of a Privacy Policy, issue of consent forms to members and updates to new member application forms and field trip forms. Steve thanked Michael Dunmore for his continuing help in running the website and keeping it up to date.

Steve Warren delivered Rob Bowell's Treasurer's report, explaining the financial position for 2017 and running through the agreed budget for 2018. Income from memberships is broadly stable and income/ expenditure is well balanced. Gift Aid tax refunds for 2016 and 2017 have been progressed by Rob. The 2017 accounts and budget for 2018 were unanimously accepted.

Neil Hubbard provided an overview of membership numbers and trends. The rate of decline in membership numbers seems to have stabilised. Neil thanked those members who pay their subscriptions on time and encouraged those not already using Direct Debit or Standing Order to do so.

Malcolm Southwood could not be present at the meeting so, on his behalf, Frank Ince explained the work they had undertaken in 2017 to produce JRS 20 and set out the planned schedule for JRS 21 that will be published in December 2018.

Frank advised that Malcolm will be stepping down as Journal Editor due to pressure of other commitments and that David Green has agreed to work alongside Malcolm during 2018. David will probably take over as Journal Editor during 2019. Frank once again agreed to stay on as Journal Manager but it really is time someone new stepped forward as a successor.

Michael presented highlights of the production and costs of Newsletter 71 (September 2017) and Newsletter 72 (March 2018), noting that he managed to remain within his annual budget. He noted that the flow of contributions was 'adequate' and that postage cost continues to be a large part of the budget and can only be expected to rise further. Michael has been Newsletter Editor for eight years now, it is now time for someone new to step forward.

Our Conservation Officer, Tom Cotterell, noted that there had been delays with the analysis service set up with Cardiff University but that this has now been sorted out. Analyses will be performed by Energy Dispersive Spectroscopy (EDS) using a Scanning Electron Microscope (SEM). Members are encouraged to come forward to use this facility for identifying their specimens.

Charity Commission rules no longer require us to have our accounts checked by an independent verifier. Council

agreed to review this matter during 2018.

All nominations for Honorary Officers and Trustees for 2018 were approved.

Under any other business a discussion was held on the future of Branches. Due to decreasing enthusiasm for joining Branch committees Council will review the future of Branches and issue a proposal during 2018 for a vote on the matter at the 2019 AGM.

The 2019 AGM will be hosted by Southern Branch from Friday 12<sup>th</sup> to Sunday 14<sup>th</sup> April at the Buckfast Abbey Conference Centre, Buckfast Abbey, Northwood Lane, Devon, TQ11 0EG. Further details about the event will be circulated to members with JRS 21 towards the end of 2018.

A full copy of the 2018 AGM minutes can be seen online at <http://russellsoc.org/wp-content/uploads/2018/05/2018-AGM-Minutes.pdf>.

**Roy Starkey**  
**General Secretary**

### **A Little Mineralogical “Sugar”:**

Since I have a little space here - you might like to see a couple more of David Green’s photographs of his minerals from Yorkshire:

**Editor.**



**Two specimens of pyromorphite from Stoddart’s Hush (also known as Hungry Hushes) in Arkengarthdale, North Yorkshire. This shows the two main colours in which this mineral occurs. The field of view for the brown specimen on the left is about 1.5 mm and for the green specimen on the right about 0.7 mm.**

## **NEWS ITEMS:**

### **Positive Signs for the Future of the Royal Institute of Cornwall Geological Collections.**

It may or may not have occurred to you to ask what the National Tramway Museum, the Library and Museum of Freemasonry, The British Postal Museum and Archive and the North of England Open Air Museum at Beamish have in common. In fact, they are all "Designated" under the Arts Council of England's Designated Collections scheme which, since 1997, has sought to identify and celebrate pre-eminent collections of national and international importance in non-national institutions. (See <https://www.artscouncil.org.uk/supporting-collections-and-archives/designation-scheme>). There are currently nearly 150 such collections spread across the whole country. The scheme aims to:

- Build a strong understanding of our shared heritage.
- Reveal the strengths of England's leading collections, described by geographic area, subject and quality.
- Guard against the neglect or disposal of the nation's treasures.
- Help to ensure that funding is directed rationally.

The benefits to organisations include:

- Strengthened support from their governing bodies.
- Enhanced ability to raise funds to support the collection.
- Raising of their profile at national level.
- Providing a focus for advocacy and raising awareness.

A number of geological collections, such as the Sedgwick Museum of Geology in Cambridge are already on that list and it may be that another notable example may be about to join them. In June 2017, the Royal Institution of Cornwall (RIC) commissioned Dr Tehmina Goskar, FMA, Director of the Curators Institute and a Research Associate at Swansea University, who has conducted extensive research on the historic copper industry with a particular interest in supply chains and metallurgical blends, to undertake specialist user and audience research focused on their extensive geological collections. The RIC runs the Royal Cornwall Museum in Truro and the Courtney Library - a specialist research library containing extensive papers also related to geology. This year, 2018, sees the bicentenary of the founding of the institution. One of the RIC's ambitions is to achieve Designation of its geological collections, especially the Rashleigh mineral collection with its associated archives.

In June this year Dr Goskar posted the results of this work on the Geological Curators Group blog (See <https://geocollnews.wordpress.com/2018/06/26/future-of-the-royal-institution-of-cornwalls-geology-collections/>). She began from the premise that, given the continuation of international research in mineralogy in Cornwall, particularly that related to modern mining and extraction, it is timely to look at what uses can be made of Cornwall's historical collections.

The geological collections at the RIC comprise 8% of RIC's total holdings and include:

- 23,000 rocks, mineral specimens and fossils.
- 13,500 mineral specimens.
- 500 petrology specimens.
- 2000 palaeontology specimens.
- 3000 Rashleigh Collection specimens.
- 2500 Wickett Collection specimens.
- Uncounted papers from RIC archives and deposited archives.
- Significant but unrecorded number of type locality specimens.

Apart from desk-based research, Dr Goskar hosted an 'inform and listen' focus group with representatives from Camborne School of Mines, Cornwall Geoconservation Group and key RIC staff including Director Ian Wall and Collections and Exhibitions Manager Jayne Wackett.

Telephone consultation and written feedback was received from a number of other stakeholders, including regular researchers and curators. Key recommendations were better access to information and data about the collection and also for the RIC to take a lead role in coordinating information and data about Cornish geology in collections outside Cornwall.

There was a repeated call for the historical manuscripts, particularly those related to the Rashleigh collection, to be digitised and conserved. The Rashleigh manuscripts have now been digitised and professionally conserved by PZ Conservation. The illustrated specimens described in Rashleigh's books (plus a few others) were photographed by Andy Tindle. These, together with other digitised documents will be available on the RIC website in the near future. In the

meantime, researchers can look at some of the results *via* Andy Tindle's Virtual Microscope on Cornish mineral heritage (ref: <https://www.virtualmicroscope.org/content/cornish-mineral-heritage>).

In the autumn, colleagues at the RCM oversaw the relighting of the traditional specimen showcases in the gallery which has transformed their physical appearance but retained the historical display that forms the centrepiece of the Rashleigh Gallery. This was a painstaking process of decanting, checking and re-displaying, expertly overseen by Karen Bell, Documentation Officer and a member of the GCG.

Angela Scarrott is a long-term volunteer who is dedicated to improving the storage and cataloguing of the specimens. She contributed her view on what we know now, what we need to know and what the future potential of the collection could be.

The main part of this study involved a 25-question survey to gather some quantitative data to back up the opinion and feedback. It was initially hoped that about 30 survey responses could be obtained in order to make a convincing case for continued investment of time and resources in the collections; in the end 127 were received. Those who took part covered a wide range of activities and interests. They comprised:

- 30% university researchers and students.
- 25% scientists in the private or public sector, including conservation.
- 20% collectors.
- 18% amateur interest.
- 15% curators, museum professionals, volunteers.

Other respondents were from the mining industry, school teachers, and one dealer. The questionnaire was completed predominantly by people based in, or interested in, the geology of Cornwall and/or the rest of the UK. Locations of interest from outside the UK included Australia, USA, South America, Egypt and Malaysia.

Among the respondents, minerals and mineralogy were the most popular areas of interest followed by history, heritage and collections and mines and mining (historical and contemporary). Strong interest was also shown in environmental aspects of geology, including in the climate, as well as specific interest in Cornwall and Cornish geology.

The respondents were a well-connected group. One-fifth were members of Cornish geological networks including the Royal Geological Society of Cornwall, Cornwall Mining Alliance, Cornish Institute of Engineers, Cornwall Geoconservation Group and Cornish Chamber of Mines and Minerals.

The most popular national networks were:

- Geological Curators Group.
- Russell Society.
- Geological Society of London, including four Fellows.
- Ussher Society.
- Mineralogical Society of Great Britain and Ireland.
- In the USA, three respondents stated membership of the American Geophysical Union.

Three-quarters of the respondents had visited the museum to see the specimens at least once and reasons for visiting included:

- "It's the best collection of Cornish minerals there is in the public domain".
- "I find the geology collection awe inspiring and always visit the gallery".
- "To see the stunning specimens and to help me with the naming of my specimens".
- "To see the Carnon River gold nugget, and to see the famous mineral collection".



**The Rashleigh Gallery at the RCM - Attracting new visitors. Picture Courtesy of the Royal Institution of Cornwall, Royal Cornwall Museum.**



**The Carnon Gold Nugget. Picture courtesy of the Royal Institution of Cornwall, Royal Cornwall Museum.**

Other motivations for visiting the museum varied from personal study or research, for meetings or other professional meeting, bringing a specialist group on a visit, and visiting while on holiday. Research enquiries were also a strong motivation for contacting the RIC. There was a big range of interests cited from physical access to specimens not on display, the museum's radioactive storage system, book research and to review commodity specimens and locations.

The number one barrier to accessing the collection was seen as the lack of an online database. Few people cited the museum's location in Truro with only 18% raising the location of the museum as a barrier. 81% of the respondents said that they used online databases during their research, with the most popular being Mindat.org

The majority of respondents also wanted to be able to easily access specimens on display as well as scope for close examination. Easier access to the archives and papers associated with the collections was also high on their list.

Respondents were asked to select the main reasons they thought the RIC collections were significant. Overwhelmingly, they said the collections are integral to Cornwall's cultural and natural designated landscapes. 91% recognised the importance of the collections to the Cornish Mining World Heritage Site. The other landscape designations in which the collection forms an important part are Cornwall's Sites of Special Scientific Interest (SSSIs). 76% said their rarity value made them significant and 75% agreed with the statement that the collections were crucial for UK geological studies. 62% felt the collections support Cornish identity and raise Cornwall's profile.

Among a number of quotes highlighted, one seems to sum up the strength of feeling of other respondents:

"Cornwall's mineralogy is akin to a mineralogical rain forest in terms of the high quality and rarity of species and quality of specimens. Cornish minerals are classics and you have the best intact historic collection in the world."

The survey ended by asking a series of questions about future uses and support of the RIC collections. The majority of respondents offered help, for example, in the form of letters of support and collaborative research proposals. Other offers included providing specimens to address gaps in the collection, including new specimens discovered in Cornwall, photography and research, and material to test ideas on.

Among the words of advice received from survey respondents were:

- "Confidence attracts: you have wonderful stuff, so make the most of it".
- "The RCM is the obvious place to visit to see real exhibits".
- "Delighted that Designated status is being pursued for this inspiring and important geology collection".

Although the timescales for submitting an application to Arts Council England for Designation can be significant, with such a unanimously positive response by both amateur and professional researchers, it is hoped that this encouragement and support will assist the RIC to attain "Designated" status for this highly significant collection. It is certain that such a step would constitute a valuable element in any plans to preserve the nationally and internationally important collection for both present and future generations



**One of 62 specimens of clinoclase including 26 in the Rashleigh Collection; also showing the iconic Cornish species lironite that is likely to be a type locality specimen, possibly from Wheal Gorland. Picture courtesy of the Royal Institution of Cornwall, Royal Cornwall Museum.**

Thanks are due to Dr Goskar for allowing the use of her material in the preparation of this article and also to Ian Wall, Director of the Royal Cornwall Museum, for permission to use the RIC copyright pictures. Thanks are also in order for those of you RS members who contributed to the survey. It's nice to see the Society feature so prominently in the list of "national networks". Let's hope everything works out as we hope it will.

**Editor.**

### Cheltenham Mineral & Geological Society Special Event.

The Russell Society has had a long association with the Cheltenham Mineral and Geological Society (see the earlier note about the Maisemore Event).

The CMGS is celebrating the 50<sup>th</sup> anniversary of its foundation in 1968 by holding a special meeting on 12<sup>th</sup> October 2018 at their usual meeting place, Shurdington Social Centre, Bishops Road, Gloucester, GL51 4TB from 19:00. The speaker is Dr Michael Simms from the National Museum Northern Ireland. His talk will be about a giant meteorite impact in North West Scotland and how the story of its discovery became a television documentary. There will be light refreshments and a display of minerals and fossils belonging to various members. Any Russell Society members and friends will be welcome.

For further information and to book a place e-mail [cmgs@hotmail.co.uk](mailto:cmgs@hotmail.co.uk).

**Editor.**

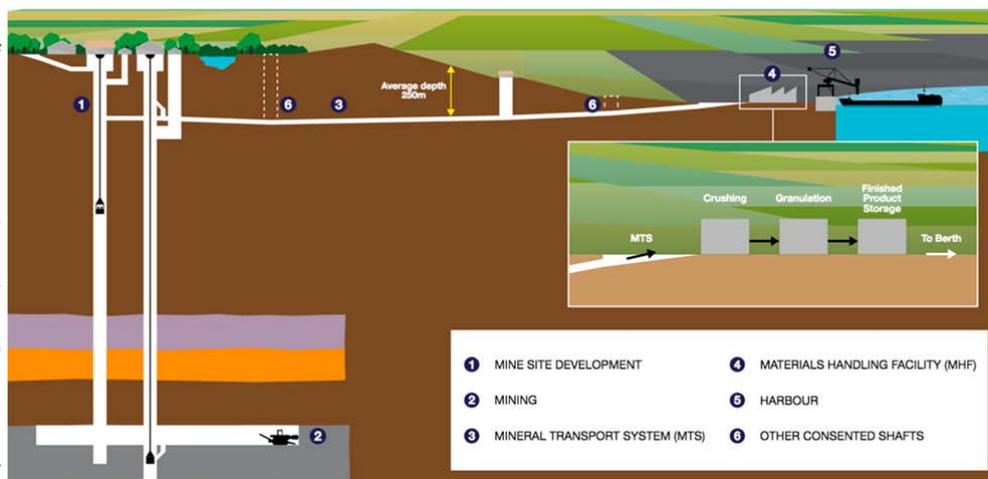
### UK Mining News Snippets.

#### Sirius Minerals' Woodsmith Polyhalite Mine in North Yorkshire.

A headline on the Mining News Website in June this year proclaimed "Sirius Minerals soars after securing supply deal for Nigerian market". The British company is currently engaged in the construction of a large polyhalite mine beneath the North York Moors National Park. This involves the sinking of two shafts to a depth of nearly 1600 metres and the building of a 37 km. underground mineral transport system that will take the mined polyhalite directly to a handling facility at Teesport.

The mine, which aims to be one of the world's largest in terms of the amount of material extracted, is planned to generate an initial 10 million tonnes of polyhalite per year before later entering a second phase that will double that level of production. It is claimed that the operation will create about 1,800 jobs during construction and 1,000 permanent positions once it opens, in May 2021.

Polyhalite is a natural evaporite mineral that contains a number of important plant nutrients – specifically potassium, sulphur, magnesium and calcium. This, it is claimed, makes it a better fertiliser than traditional "potash" products. Polyhalite has a low chloride content which makes it suitable for a number of chloride-sensitive crops such as many fruits, berries and vegetables. It can also be used in its native state; the only processing required to arrive at an agriculturally useful product is crushing and screening. It therefore has a low carbon footprint and has been accepted by many bodies as suitable for organic crop production.



**Schematic diagram of the proposed Woodsmith Mine and its mineral transport system. Sirius Minerals picture.**

Some doubts were cast on Sirius's plans at one stage because there was seen as being no demonstrated world market for the product. However, Sirius were confident that they could sell polyhalite and the latest deal covers the purchase of up to 350,000 tonnes of fertilizer a year for the seven years following the start of production. Sirius said that the deal

also gives it exclusive marketing rights into Nigeria. Managing Director and Chief Executive Chris Fraser said “Africa is a huge potential market for POLY4 (the name of the Sirius product) and we are very pleased to establish our initial footprint in Nigeria, which is the largest market in West Africa”. This brings the total of firm orders for the product to 4.7 million tonnes of fertilizer a year, against a target of six to seven million tonnes, announced earlier this year – not there yet but definitely progress. The development was certainly viewed positively by the market as Sirius shares rose by more than 4% after the announcement.

**Project to Reopen South Crofty Mine.**

The Canadian mining company Strongbow has, for some time, been seeking to reactivate the South Crofty tin mine near Camborne in Cornwall. This iconic mine closed in 1998 after 400 years of activity and various attempts to revive it in this century have all run into difficulties, primarily because of the low world price of tin.

Tin production in Cornwall in modern times has always been critically dependant on the world price of tin. Over the past couple of years, decreasing tin production from the world’s leading producers (China, Malaysia, Indonesia and Peru), coupled with a rising demand from the electronics industry, have driven something of a price recovery. The metal has been selling above £22,000 per tonne in the last year although, at the time of writing, it had dropped back somewhat to £19,600.



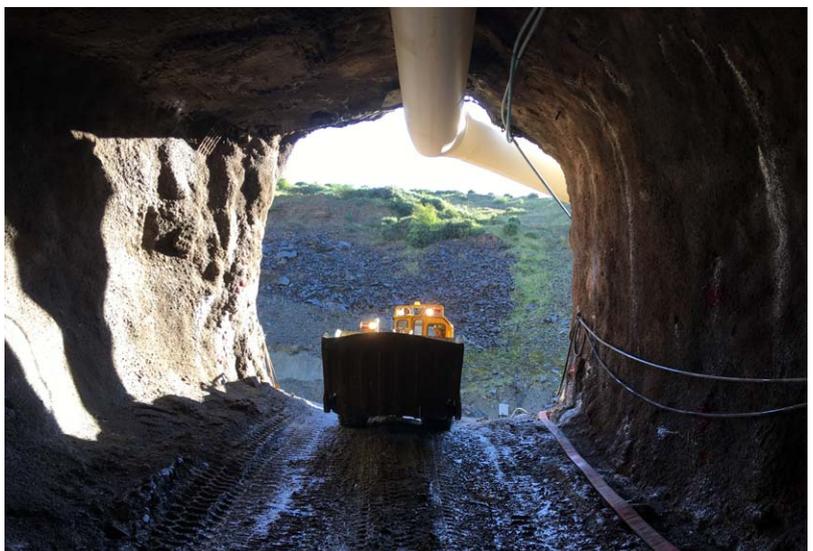
**The Cooks Kitchen shaft headgear at South Crofty Mine. Soon to be working again? Wikipedia picture.**

In May this year Strongbow announced that it would list on the London AIM market from June (AIM is a sub-market of the London Stock Exchange that allows smaller, less-viable companies to float shares with a more flexible regulatory system than is applicable to the main market). This is seen as a preliminary to raising some £25 million over the next 18 months to finance a feasibility study on reopening the mine and restarting production.

Strongbow has described South Crofty as “one of the highest grade undeveloped tin projects globally”. They estimate reserves of tin at the mine to exceed 30,000 tonnes and envisage that mining could recommence in 2021. We shall see!

**Positive Developments for Northern Ireland Gold Mines.**

Recent reports present a positive picture of the nascent gold mining industry in Northern Ireland. It has long been known that the Province possessed some of the world’s richest undeveloped seams of gold, but the political situation there has discouraged investors from exploiting them for decades. Now that is changing.



**A scoop tram at the entrance to Galantas Gold’s Omagh Mine. Picture copyright Galantas Gold Corporation.**

Another Mining News website headline in June was “Galantas Gold jumps after hitting main vein at Irish mine expansion”. It referred to the fact that underground development work at the company’s Omagh mine in County Tyrone has intersected the main gold-bearing Kearney Vein. The tunnel that Galantas has dug descends with a gradient of 1-in-7 from near the base of the former open pit mine, which is now exhausted. The vein intersection, which shows the vein to be some 2.8 metres wide, is about 15 metres below the base of the open-pit

and reaching it means that the company can now begin limited production, with increased feed to the mill over the next few months.

The company also said it planned to develop a horizontal tunnel, which is expected to provide a further feed to the mill later in 2018. It will also extend the existing decline tunnel in late 2018 or early 2019 and has said it expects to produce about 8,000 ounces of gold next year. The Omagh Mine remains the only actively producing mine in the Province.

The other player in Northern Irish gold is Dalradian Resources, which is pursuing a gold prospect at Curraghinalt outside Gortin. The project, for which Dalradian has yet to secure the various permissions needed, is estimated to hold 3.1 million ounces of gold reserves. So far, it has carried out exploratory drilling at the site and compiled a planning application (10,000 pages of it!) which it expects will take about two years to process, including a public enquiry. The Canadian company said last month it planned to operate the proposed gold mine initially for 20 years, although it says Curraghinalt has the potential to remain in production longer than that. Still some way to go here, I think.

Dalradian recently agreed to be bought by Orion Mine Finance, in a deal that values the exploration company at around £175 million. This was clearly seen as a positive development as the Dalradian shares promptly rose by more than 50% as a result of the announcement.

**Developments in the Lithium Industry.**

The ubiquitous lithium battery crops up almost everywhere these days and this is driving a growing demand for the very light and reactive metal. Major current producers include Australia, Chile, Argentina and China with some 174,000 tonnes being produced in total in 2015. Nearly half of this went into battery production. The world’s auto industries are now diving into the market as demand for electric vehicles rises – to the point where some analysts are questioning whether the lithium mining industry can keep up with the demand. It is estimated that Tesla alone could have a requirement for 8000 tonnes of lithium a year.

Some of the world’s lithium is a product of hard-rock mining (Australia) but much is produced by the atmospheric evaporation of saline lakes or “salars”. This sounds a very easy and simple – albeit slow - thing to do, but weather conditions can markedly affect the efficiency of the process. Lower temperatures and higher snowfall in the Andes have contributed to markedly lowered production from the Argentinian and Chilean industries recently. There is thus an interest in other methods of extraction. Into this arena has stepped a small Canadian company called MGX Minerals Inc. which has developed, in partnership with another Canadian company, PurLucid, a technology able to cut the time for extraction of lithium from brine to a single day. This technology involves nanoflotation and nanofiltration, but exactly what it is remains unclear (patents are pending). Container-sized modular plants are being trialled at some of the Chilean salars and also being used to recover lithium from oilfield brines in Alberta, some of which contain 140 mg per litre of lithium.



**Lithium mining in the Argentinian Andes. Sometimes a long wait for your product. Wikipedia picture.**

This is all possibly relevant to the plans to exploit the lithium-rich mine waters of South Crofty (see above). Strongbow has entered into a deal with new company Cornish Lithium Ltd., a start-up hoping to lead the development of a lithium industry in the UK. The agreement allows the British company to explore, using Strongbow’s mineral rights, for sources of lithium-bearing water in and around the Cornish granites. The success of any such venture will clearly depend critically on the efficiency of lithium recovery from very large volumes of water and the cost of getting the metal to the purity required for battery production. It was not initially clear what methodology Cornish Lithium proposed to employ for lithium recovery. Perhaps this new technology has something to contribute?

**Editor.**

## Mineral Shows – Then and Now - Exclusive or Inclusive?

I tend to think of mineral shows as being an important source of information, contacts and, of course, specimens. I am still a fairly active field collector and I feel there is nothing so satisfying as a specimen that you have extracted from the earth with your own muddy hand. However, I have also been known to acquire material in other ways. I occasionally buy things on-line, although experience has taught that this is an avenue not without its pitfalls. I also trade my surplus material with others and I buy things at mineral shows. In general, there is no substitute for holding a specimen in your hand before you buy it, seeing the size and feeling the weight of it and scrutinising it with a lens, as well as seeing all sides of it in normal room light (i.e. not just a couple of photographs of part of it, produced with cunning lighting and probably a dash of Photoshop as well).

As I mentioned earlier, I have been thinking about mineral shows in general; what they offer, what is important to me and so on. I suppose my definition of a “good” mineral show includes such things as a nice venue with good lighting and decent coffee (and preferably not 250 miles from where I live), a reasonable number of good mineral dealers (by which I mean people who provide quality material at sensible prices) with a broad range of different mineral species, the availability of mineral sundries and “peripherals” (boxes and trays, display bases, tools, books and journals etc.), along with the opportunity to meet and talk with friends and the experts who can help me with problems. If I ever find one – I’ll be a happy man.

Earlier this year, an editorial in the French mineral magazine “Le Règne Minéral” bemoaned the fact that “fings ain’t what they used to be” in the world of mineral shows. In translation (courtesy of Tim Greenland) the editorial reads:



**The Huge “Mineral & Gem Exposition” at St Marie aux Mines in Eastern France. Something for everyone. MTD Photo.**

*As you will see from our calendar of future events, the number of mineral fairs is still increasing greatly. Meetings are being organized all over France in addition to the established events. However, mineral trading at these new shows is only poor, given the present economic situation, and their proliferation is no solution in the medium or long term. The quality in many of them is poor, with an invasion of junk jewellery or ‘fantasy’ work (with little fantasy!), and galloping ‘lithotherapy’. As a result, many (although not all) of these fairs become commonplace and lose their friendly character as places where passionate collectors could meet and talk. What should be a treat, and still was only some 10 years ago, becomes a vulgar and soulless commercial opportunity. This multiplication of events seems to me to be a step in the wrong direction. Where there were only 3 to 6 shows a year in a region, there are now some 10 or 15. The collector can’t keep up – and neither can his wallet! He must either divide his budget by the number of shows or go to only the best of them – or not to go to any at all because there are other purchase and exchange opportunities available today. Indeed, the ‘web’ provides sites that can substitute for several shows. The cake is sliced thinner and thinner and everyone’s share is reduced. Dealers are suffering too, from increased costs of travel to be present at as many shows as possible.*

*Of course, the picture is not all black; certain events manage, despite everything, to maintain a high level with participants and ‘prestige’ showcases that live up to their name. Indeed, some regional events achieve good quality with a mix of commerce, culture, conviviality and conversation – to everybody’s pleasure.*

*Initially these ‘bourses’ were social occasions; exceptional events that were waited for with anticipation and attended for the pleasure of discovery and learning, and of meeting and exchanging with other passionate practitioners. Some people would travel hundreds of kilometres in the day so as not to miss the occasion.*

*In my travels, I have had the chance to attend foreign single-day shows – what a profusion of minerals and fossils in these places! From 8.30, half-an-hour before the opening, the collectors begin to arrive and to chatter together over a steaming cup of coffee – or perhaps a flask of schnapps or grappa passed from hand to hand. The church clock rings 9 o’clock, the doors open and the collectors rush to be the first at their favourite stand. The serious dealing gets under*

way – and stories and information get shared – perhaps some ‘spam’ too! All passes in good humour and with smiles. Before you know it, it’s already 5 o’clock and time to close. The party is over and everyone goes off home again, happy and satisfied. Like a sprint, it is all very quick; some have seen everything, others not – but the atmosphere was there – just like old times, you might say. The model is interesting and, perhaps, to be followed. A show should, above all, be for enthusiasts. If you have a moment, go to a village garden market – you will find an atmosphere very different from the sort of show in our microcosm today and more like that of the events of 1975 – 1990 (without wishing to be an ‘old fogey’!!!).

In recent times, some private sales of this nature have been organised. You will not find them in any calendar – even on internet – but the old ‘jungle drums’ come out of storage and word-of-mouth contacts spread the news so that a few tens of collectors and a few dealers meet for a single day. The party gets into full swing with discussions, sales, purchases and exchanges between passionate participants. Midday brings its picnic and the bottles go around, tongues loosen, stories are told and re-told and legends are born or repeated. Beautiful specimens and rarities come out of their boxes; the atmosphere is just simply great.

Why all the secrecy, you may ask? Perhaps simply to preserve that atmosphere and to avoid the sales of objects that have no real place in our fascinating hobby. Why should we not try to recapture the spirit that was present at our events such a short time ago???

Our shows should not be allowed to fall into mediocrity, so let us all reflect on the future of these events that are at grave risk of becoming uninteresting and so numerous as to court their own extinction.

Louis-Dominique BAYLE  
Director of Publication, Le Règne Minéral.



Busy times at the Sussex Mineral Show in Haywards Heath. MTD Photo.

The Rock Exchange in Bakewell, Derbyshire. MTD Photo.

What do you think of this viewpoint? I think it’s an interesting one but, to my mind, it raises a few questions – as perhaps it does in yours.

- I’m not sure the situation in the UK is quite like that described here – we don’t actually have a huge number of shows and distances to be travelled are generally smaller than in a large country like France. There is certainly a lot more jewellery, crystal healing and suchlike material at some shows than there used to be. However, does this automatically mean there are fewer interesting minerals for sale or fewer interested and interesting people available to talk to? Is this not a heaven-sent opportunity for the “mineral enthusiasts” to engage with a wider (albeit naive) audience and convince them of the joys of “sensible” mineral collecting? How do you feel about this?
- Speaking personally, I’m always rather suspicious of appeals to get back to “the good old days”. Trying to turn the clock back is seldom a great idea in my experience. It may be true that “we used to have such fun in the old days, before they let in all these odd people who are spoiling our experience” but we could also buy petrol for three bob a gallon (apologies to those under the age of 40) – and I don’t think those days are coming back.

In an age of almost enforced inclusivity in all walks of life trying to limit who participates would bring a host of problems. Words like “worms” and “can” come to mind. What do you think?

- There is also the inescapable truth that putting on mineral shows is a commercial activity – it has to make money. If I were a show organiser and wanted to see the maximum number of people coming through the door to keep my dealers happy and my own cash register clicking then I wonder how favourably I would look on a proposal that it should be all about “me and my mates” (rather a small number of mates, I fancy) having a convivial coffee and rushing in at 9 o'clock to snaffle all the best bits before spending the rest of the day chatting. Many of you are buyers and some of you are dealers, some of you are involved in putting on mineral shows; what do you feel about this?
- The “private party” model clearly has possibilities, particularly if you are one of the “in crowd” and get to attend. There is no law against it. I just can't get the word “elitist” out of my mind. How about you?

I could go on – but won't. I am, however, interested to know what you think on this subject. What do you think about the mineral shows in this country - or indeed anywhere else you may have visited? Do you attend them regularly? Have they changed greatly over time? For better or worse? What is your idea of a “good” mineral show? Do you feel threatened by “galloping lithotherapy”? Why don't you drop me an e-mail? If I get enough interesting responses it might form the basis for an article in a future Newsletter.

**Editor.**

### **UK's Largest Ever Gold Nugget Found in Scottish River.**

There is a lot of interest in gold mining in Scotland at present. The first commercial gold mine in Scotland, the Cononish Mine near Tyndrum in Perthshire, received full planning permission earlier this year and the owning company Scotgold hopes to extract an estimated 5,700 kg of gold from it. There is also a great deal of more informal and less commercial interest in the precious metal. Many amateur prospectors also head to the Tyndrum area as well as others such as Helmsdale in Sutherland. Places such as the Museum of Lead Mining in Wanlockhead run gold panning courses and the Scottish and British gold panning championships held in the village attracted hundreds of people. Of course, a lot of people looking does not equate to a lot of gold being found – but sometimes you just get lucky.

A recent story on the BBC News website and in various newspapers describes how an amateur prospector discovered what is being described as the largest gold nugget ever found in the UK while lying face down in an un-named Scottish river. The British man, whose identity remains unknown, found the 85.7 gm (3.02 oz) lump of gold while searching the riverbed with a snorkel. Named the “Douglas Nugget”, it is thought to be the largest discovered in the UK for 500 years. The gold is of an irregular shape and invests a significant amount of white quartz. With such an unprecedented find it is hard to put a price on the nugget but estimates in excess of £50,000 have been mentioned.

The nugget was actually discovered two years ago, but the exact location of the find has been kept secret to avoid a gold rush. The finder described how he had been following a crack in the bedrock and had already found around 2 gm of fine gold when he observed a pocket which contained the nugget. He initially assumed that it was only a few grammes in weight and it was not until he removed it from the cleft that he realised what a significant find it was.



**The Douglas Nugget weighs 85.7 gm.  
BBC Photo.**

The nugget is said currently to be stored in a safety deposit box, but its legal position is not clear. “Found” gold and silver is usually regarded as belonging to the Crown Estate and, at present, it is not clear whether the finder had permission to remove it. The largest gold nugget previously found in the UK was discovered in Cornwall in 1808 and weighed 59 gm. This was the Carnon Nugget which is mentioned in the article on the RIC's Rashleigh Collection (see picture on on page 13 in this issue). Other, larger nuggets have been found offshore around the UK, for example the 97 gm nugget found in 2012 on the seabed off the coast of Anglesey in association with the wreck of a ship which sank while bringing gold from Australia. However, the latest find is the largest “British native” gold.

**Stop Press:** Scotgold has recently begun recruiting for staff to work the Cononish Mine; specifically an Underground Shift Supervisor, 2 Underground Shot-firers, 2 Underground Scoop-tram Operators and 2 Underground Drill Rig Operators. It looks as if it's actually happening!

**Editor.**

**Mineral Specimen Cabinets for Sale.**



**Cabinet 1. Suitable for hand specimens.**

**The micromount/thumbnail cabinet (left) and the two large cabinets with 42 and 44 drawers.**

Having deliberated over it for some months, I finally made the decision to dispose of a large part of my collection. It's a decision we all face – "what will happen to my collection when I'm gone?". Discussions with both daughters confirmed my suspicions that neither of them wanted the responsibility of taking it on, or had the space necessary to house it. It would also have been unfair to leave the burden to my wife, so this leads me on nicely to say that I now have 4 redundant mineral cabinets, should anyone be interested in acquiring them. All are purpose built with the intention to house mineral specimens. The drawer sizes take card trays perfectly.

Cabinet 1:

This was the first cabinet I had made; it has 5 drawers and is made from solid beech wood. The overall size is 63 cm wide, 46 cm deep & 56 cm high. It has 5 drawers, of which 4 are 6 cm deep and 1 is 14 cm deep. This is a very nice-looking cabinet & a furniture piece.

Cabinet 2:

This cabinet has 44 drawers, is stained in teak and has drawer label holders. The overall size is 1.88 m high, 88 cm wide & 50 cm deep. There are 2 drawers 25 mm deep, 38 drawers 67 mm deep & 4 drawers 100 mm deep.

Cabinet 3:

This cabinet has 42 drawers, again stained in teak with drawer label holders. The overall size is 1.88 m high, 88 cm wide & 50 cm deep. There are 2 drawers 50 mm deep, 30 drawers 62 mm deep & 10 drawers 100 mm deep.

Cabinet 4:

This cabinet is again stained in teak and has 32 drawers. The overall size is 1.73 m high, 68 cm wide & 50 cm deep. There are 19 drawers for micromounts & 13 drawers for thumbnail boxes.

If anyone is interested in some or all and needs more storage space, (and who doesn't), then please get in touch with me.

**Alan Peckover.  
Central Branch.**

## **SHORT REPORTS & PAPERS.**

### **Care of collections – some thoughts on the labelling of specimens.**

It has been a number of years – nearly twenty to be precise - since the issue of labelling and documentation of specimens and collections was discussed in the Newsletter, but at that time the debate was lively, and, in some instances heated.

I will try not to cover too much 'old ground' as much of what was recorded in Newsletters 32 - 34 is good, sound, sensible stuff. Rather, I will present my own observations and opinions. I don't expect everyone to agree with the methods I propose, but what should be fundamental to us all, as collectors, is having a way of knowing where your specimens are from. This is the one point supported by everyone in the previous debate. Not to record where a specimen is from, is to me, criminal. True, a collection without labels is still technically a collection, but really, should we not all be trying to further our knowledge or preserve material for future generations of collectors?

I fully appreciate that not everyone has the time to fully curate their mineral collection to the highest standards, or indeed to find time to read the Newsletter, but there are some important considerations to be made when collecting anything. Everyone collects for different reasons: for the beauty of minerals; for the science; as an investment; or, perhaps, because of an affiliation to a particular area. I will not go in the rights and wrongs of anyone's collecting habit, but I will here provide some (hopefully) useful advice in terms of making your collection more important – and that could mean scientifically, or monetarily.

Over the years I have heard countless stories of mineral collectors, or indeed dealers, removing old labels associated with specimens and either disposing of them, or misplacing them. There are many reasons why this might occur including where the previous owner does not wish to be identified, but in almost all circumstances valuable historic information is lost. I, personally, am a firm believer in always keeping labels with specimens. There are of course occasions, such as if a specimen might be prone to pyrite decay or if the specimen is particularly dirty, where the associated labels require placing in a plastic wallet in order to prevent acid burns, or staining.

Some institutions choose to store all historic labels separately from their specimens. This, I find, makes looking through a collection a chore. Particularly if the labels are stored in a room separate from the specimens themselves. I much prefer to have everything in one place, as was originally intended. The benefit of this – as demonstrated time and again during my research on historic collections – is that as one looks through the drawers of specimens the significance of older specimens jumps out at you straight way, whereas when the old labels have been stored elsewhere the importance of the historic specimens within a collection is forgotten. In the worst cases of all, some of the most historically significant specimens have been assigned to teaching collections where they are then damaged or lost.

Another problem associated with removing labels is how to store them separately. I have seen examples of old labels having been covered with Sellotape to fix them into pages within a ring binder. The Sellotape yellows with age and eventually fails, leaving the yellow-stained label to fall off from the page. Some are glued to a page of labels, but again, depending on what adhesive is used this can either damage the label, or fail and the label fall off the page. Unless that label has been marked with some sort of modern code number then it is all too easy for it to become disassociated with its original specimen. It is also all too easy for the archive of old labels to be forgotten about and then lost from sight.

Ideally, if the original label is to be kept separate from the specimen a photocopy, or better still a colour scanned copy, should be placed with the specimen. That way the original features of that label, such as paper colour or subtle shades of ink colour, can be appreciated at first glance.

So, let us now look at labelling techniques. There are many and I will cover some of these here.

Tray labels, or the paper (or card) label which accompanies a specimen in its box, should be as detailed as possible. Most collectors, or institutions, choose to write on just one side of the label, but there is no reason why both sides cannot be used. Sometimes, key information can be presented on the front of the label with additional data, such as price paid, or exact grid reference, on the back so that visitors to the collection only see the basic information.

Typically, the information recorded will consist of: mineral species present, perhaps with a description of what each looks like for the untrained eye; locality (sometimes termed provenance), ideally including a grid reference and perhaps a brief description of the circumstances of where it was found – e.g. North face of quarry; collector; date of collection; previous collection details; and a unique collection code number.

I would also highly recommend attaching a label to the specimen but for this the level of information recorded can be much less than on the tray label. The information on either label should be printed, or written, using permanent ink (Indian ink is best) preferably in black. I have personally trialled various coloured inks, but for some reason black always looks much smarter. Biro is a definite no-no as it will fade rapidly on exposure to sunlight thus rendering the label useless.

The advantage of printing labels is that they are generally legible, although a certain amount of trial and error is required in order to find the most appropriate font style and size. It should also be remembered that a suitable paper is required in order to produce a crisp finish. Multiple labels can be produced, so speed of production is a big plus, but I can't help feeling that printed labels are 'soulless'. Handwritten labels, on the other hand, ooze character. However, I would only recommend them if your handwriting is neat. Typically joined-up writing is harder to read, so this is a major consideration when producing the very small text required for labels to be attached to a specimen. Tray labels are a different matter entirely, but they should always be smartly produced and legible.

When writing labels my weapon of choice is a Rotring isograph pen. Other brands are available, but in twenty years I have never found anything remotely as good. They are a refillable cartridge pen with a range of interchangeable nib sizes, but I would recommend the 0.1 mm for the very smallest of labels (those to be attached to the specimen) and something between 0.25 and 0.5 mm for larger handwriting such as on tray labels. They are not cheap – I think that the last one I bought cost me about £18 – but if you care for it, it will last a considerable time. You can also buy larger packs with several different nibs which brings the price of each nib down slightly. They are specialist so you will have to search around online to find a supplier. As a word of caution - from one who has experienced this many times - don't leave the pen lying around with the top off. It will roll off the table and is guaranteed to land nib-first and the finer the nib the more likely it is to bend and snap off. Also, if the pen is not used regularly the ink can dry inside the nib and although the nib can be removed for cleaning (simply flushing warm water through it) repeated drying out of ink will invariably lead to a blockage that cannot be easily fixed. Never, remove the filament from inside the nib. I have tried this a few times and the filament always bends when it is reinserted, thus, ruining the nib. There are many cartridgeless pens available much cheaper but I have always found that the felt nibs are all too thick to produce the tiny handwriting required for the smaller labels.

When looking through collections it is very easy to pick up a couple of specimens and place them back in the wrong box. For this reason, all institutions, and many private collectors, will affix a label to the specimen. This should be undertaken with care and sensitivity in order that the specimen is not spoilt - I have come across countless museum specimens where number labels have been glued over the area of interest on the specimen. Even if this is not the case, the positioning of a label can also affect the aesthetics of a specimen and potentially its value. Ideally, the label should be out of sight on the underside of the specimen and affixed using a reversible adhesive. Some super glues yellow over time thus rendering the label unattractive and most are permanent. Many museums choose to use a restoration adhesive known as B72. This dries clear, and remains so, and can be removed easily using acetone (nail polish remover). Alternatively, a clear nail polish could also be used.

As many of you are aware I once had a habit of writing incredibly small labels. I still can, and occasionally do, but I am sad to say that I can no longer read the writing on some of my finest early works. However, with the aid of a microscope they are all still entirely legible and serve as an important source of information pertinent to each specimen. Earlier still, I trialled printing tiny labels, but found them rather dull. Hence, why I resorted to perfecting microscopic handwriting.

Advances in printing technology have enabled smaller and smaller font sizes to be printed. Call me a Luddite, but I still prefer handwritten labels, as this gives one a sense of who the collector is, or was, which one simply does not feel with printed labels. It also has the potential to allow collectors, or curators, in the distant future to place whose collection the specimen belonged to: printed labels are often identical (unless a unique numbering system is employed). That said, any label is better than none – although I do draw the line at Tipp-Ex on a specimen!

So why then, you might ask, write so small? Well, this is because the label is to be affixed to the specimen, and as with any good label attached to a specimen it should be as unobtrusive as possible. Many institutions and collectors use just a simple number code as this allows for a very small, discreet, label, but this relies on the associated collection catalogue, or database, being present. All too often, with older private collections, catalogues get forgotten and mislaid resulting in specimens losing all of their background information. This is less of a problem in modern museums where the catalogue information is preserved on a database which is itself backed-up multiple times. However, the failure of a hard drive at home could result in the total loss of a private collection database, and the consequent devaluing of a collection. Therefore, it is always good to have a printed (or handwritten) catalogue as a hard copy backup.

If one was thinking of using a coded numbering system there are important considerations to be made from the outset.

The majority of private collectors use a simple ascending number sequence: 1; 2; 3; etc. perhaps prefixed by their initials, so for Joe Bloggs: JB1; JB2; JB3; etc. With this system certain problems may arise. If the collection is still expanding (this is not so much an issue if the collection is already complete and is only now being numbered in its entirety) then if a new, better example, of a species is added one might wish to remove the earlier, poorer quality, specimen resulting in a missing number in the sequence. This is less of a concern for institutions where the ability to remove an earlier specimen is highly restricted, but as it happens many employ an entirely different system of numbering.

Many institutions employ a system related to date and order of acquisition. For example, at the National Museum of Wales mineral specimens are recorded with the prefix NMW followed by the year of acquisition, then the number of that particular accession during that given year, G (for Geology), M (for Mineralogy) and finally the number of that specimen within that particular batch (accession) of specimens – e.g. 2018.8G.M.1. The Natural History Museum, London, began (as the British Museum [Natural History]) with a simple ascending sequence prefixed with BM – e.g. BM 1; BM 2; etc. – but switched during the early twentieth century to include the year – e.g. BM 1971,307. A private collector could try something similar, e.g. JB 2018/01/1.1 = JB for Joe Bloggs / 2018 for the year / 01 for the first month / 1.1 for the first specimen acquired on the first day of the month or even JB 2018,1; JB 2018,2, etc. This system allows for every specimen to have a unique code number and also allows for a backlog of specimens to be numbered correctly at a later date – something of a problem for the simple ascending number sequence where it is difficult to leave gaps.

So, what other information should a label attached to a specimen hold? I prefer to have some limited locality information also affixed to the specimen, perhaps in the form of a mine name and county along with a collection code number linked back to a more detailed catalogue. NOTE that I have not stated that the mineral name should be added to this label. This would be ideal, but where space is limited the species name can be omitted. The reason of this is that, with experience, the identification of a mineral is relatively straightforward. This is even more so when you know where it came from. However, without a locality very few specimens can be provenanced with confidence. True, some mineral species such as lironite, can be narrowed down to a small number of mines near one village, but what if research of historical records showed that this species actually came from several mines? How sure would you then be that you really, truly, know where your specimen came from? This problem has been rife with mineral dealers for not just years, but centuries. It is always tempting to assign a locality to an unprovenanced specimen, especially so when that allows you to increase the price for which you sell that specimen.

Years of experience working through museum collections has shown me that most dealers make mistakes, some more than others, and if I was being cynical one could suggest that some of these are deliberate. What is certain though, is that once a mistake enters the published record it is oh so difficult to correct the errors that permeate from this.

With private collections another advantage of providing locality information on a label affixed to a specimen is that it partially removes the need to have a code number system. Note the term ‘partially’ – Institutions use a unique number to reference a specimen back to a catalogue or database which provides additional information. If you are able to fit all of the information onto a label attached to the specimen then, for private collections, this negates the need for an overall catalogue. However, if additional information is to be added to a tray label it would be convenient to have some sort of code number to relate the tray label to the specimen – in case they become separated.

During the earlier debate within the Newsletter (during the 1990s) it was remarked that most private collections end up being split up and dispersed with the consequence that a catalogue becomes redundant. This is partly true, but it should be remembered that for historic collections the catalogue is often the most important part, particularly, with regard to studying the social history side of networks of collectors and collecting sites. Personally, I find old catalogues to be a fascinating resource of information in their own right, even if the collection is long gone. I think that many collectors don't appreciate, or don't realise the significance of, what they have in their collection but fast forward 200 years and that collection would tell much to a historian studying collecting habits two centuries before. In order to provide a flavour of what I would consider right, or wrong, I have included a few images of labels (tray labels and labels affixed to specimen) from various different collections.

Figure 1 shows a handwritten label bearing a single number with a distinctive straight border – affixed to the specimen. This label is from the



Figure 1.

Joseph Neeld Collection (1789-1856). Neeld's collection remained within his family until the 1970s at which point it was acquired by the dealers Gregory and Bottley who, retaining the original manuscript catalogue, dispersed the majority of the collection to collectors and dealers worldwide. Although just a number, the style of Neeld's labels makes them instantly recognizable, but without the catalogue the key scientific information pertinent to each specimen is easily lost. This, therefore, places all of the emphasis on the preservation of the catalogue – without which the collection is scientifically worthless. Imagine if this label was a typed number using a generic font – there would be very little chance of knowing whose collection it was from. Better than no label at all, but very low in my ranking of usefulness.

Figure 2 shows a handwritten label, providing nothing but the initials of the collector and an incremental code number relating to a database – affixed to the specimen. This label is made from a sticker and consequently the adhesive is prone to failing over time. Without the database, all information – apart from the collector's initials – is lost and the specimen becomes scientifically worthless. This type of label is useful as a temporary 'fix' until the specimen is properly labelled and catalogued, but should not be considered as a permanent label.



Figure 2.

Figure 3 shows a typed label bearing just the name of the collection – affixed to the specimen. This type of label provides no useful information and has probably been added later, not by the collector, but by an institution to highlight the collection to which it belongs. However, with no provenance, identification details, or unique code number relating it to a database or catalogue, the specimen is scientifically useless.



Figure 3.



Figure 4.

Figure 4 shows a handwritten label, bearing mineral species and provenance information, but no catalogue number – affixed to the specimen (ignoring the later museum number). This label was produced by Caroline Birley (1851-1907). Birley donated many specimens to museums and collectors around Britain and this is one such specimen. It is unclear if she ever specifically catalogued her collection, but she certainly labelled her specimens well, even those that were sent to institutions as duplicates. As such, her labels are distinctive, recognizable, and well attached to her specimens. They ooze character and, arguably, using this style of label she did not require a catalogue in order for her legacy of specimens to be preserved.

Figure 5 shows a handwritten label, bearing mineral species, provenance information and unique collection code number – affixed to the specimen. This label was produced by Dr Robert ("Bob") King whose collection is preserved at the National Museum of Wales along with several handwritten manuscript catalogues which relate to the specimens. Dr King did not produce tray labels, instead, favouring the discrete labels affixed to the back of each specimen. His collection code number frequently incorporates the year of collection, in this case 1943. The prefix 'K' signifies 'King'. Note the use of capital letters to improve legibility. An extremely useful label.

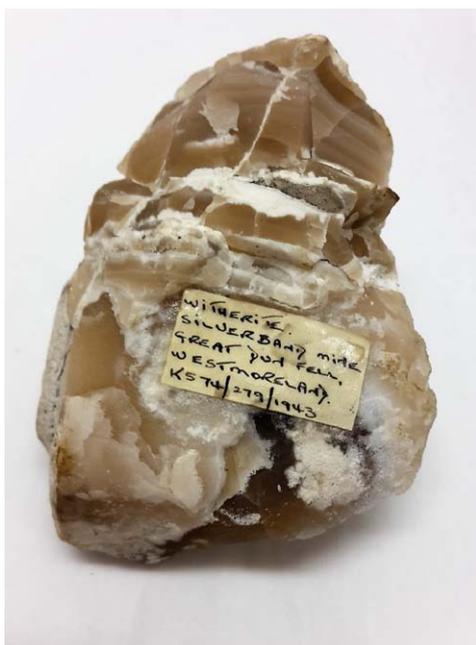


Figure 5.

Figure 6 shows a handwritten label (the upper label), bearing mineral species, provenance information (including grid reference), collector and collection date, but with no unique collection code number – affixed to the specimen. This label was produced by Trevor Bridges whose informative article in Newsletter 32 (1998) sparked a useful debate regarding the importance of labelling specimen. Note the use of capital letters which improves legibility. Again, a very good example.



Figure 6.

Figure 7 shows a typed label bearing mineral species, provenance - including grid reference, unique collection number and collection date – affixed to the specimen. This is one of my own early attempts at labelling and the printing has resulted in a slightly blurred text and the typed text has little in the way of character.

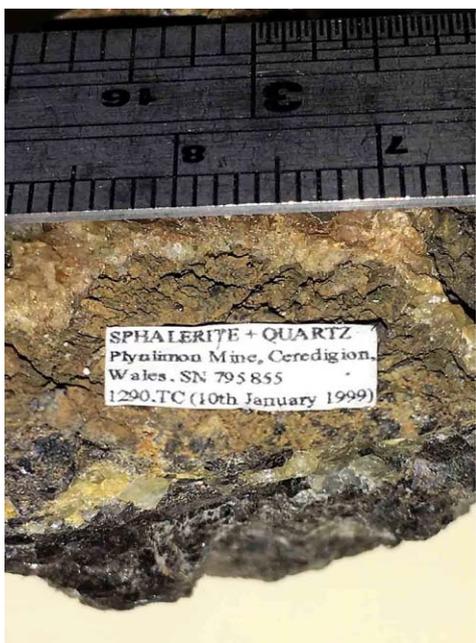


Figure 7.

Figures 8, 9 and 10 are, I think, an improvement on the typed version and show how the amount of information can be reduced for smaller specimens, where the physical area available to fit a label is limited. Ideally, a grid reference would be beneficial, but this can always be recorded on a tray label, or within an accompanying catalogue. As a general rule, the more concise the information the more aesthetically appealing a label becomes, so it is a case of finding the happy balance. Figure 8. Records the mineral species, provenance and a unique code number. Figure 9. Records provenance and a unique code number. Figure 10 records a basic provenance and a unique code number.



Figure 8.

If we look now at a couple of examples of tray labels from older collections:

Figure 11 shows a handwritten tray label, bearing mineral species and provenance information as well as coded symbols relating to who the specimen was acquired from (in this case Hh = Henry Heuland), what lot number it was within an auction (in this case no. 411), year of acquisition (in this case 1832) and significance of the specimen (in this case o/..... = super rare). This label is from the Isaac Walker Collection (1794-1853) which remained in his family until 1912, at which point it was dispersed through various mineral dealers in London. Instantly recognizable and beautiful in style the only criticism here is that no information, or catalogue number, is affixed to the specimen. Fortunately, Walker's labels are so sought after that they rarely become separated from their associated specimen. In this particular case the label had been separated from the specimen, albeit stored within a separate label archive, and it was only recently that its significance has come to light. The code numbers H3843 and K5474 indicate that this specimen was in both the Harwood and King collections and it is now preserved in the collections in the National Museum of Wales.



Figure 9.

Figure 12 shows two handwritten tray labels associated with the Lady Anna Grosvenor Collection (c.1791-c.1860s). Both of these labels have, like many in this collection, been separated from their specimen. Clearly written by different people these two labels are probably related to the same specimen, but once separated it becomes very difficult to be certain which specimen they should be with. Very few of the Grosvenor Collection specimens bear any sort of number and only



Figure 10.

one, small, and very vague catalogue is known. Crocoite (chromate of lead) is the mineral species and the lower label informs us that it is from Siberia (actually the Berezovsk mines near Ekaterinburg) which was the main source of chromate of lead during the early nineteenth century. The Grosvenor Collection fell into neglect and was rescued from almost certain destruction, during the early 1980s, by Bob King. Unfortunately, the labels had already been separated from the specimens. Subsequently, many of the labels have been matched up with what would appear to be the correct



Figure 11.

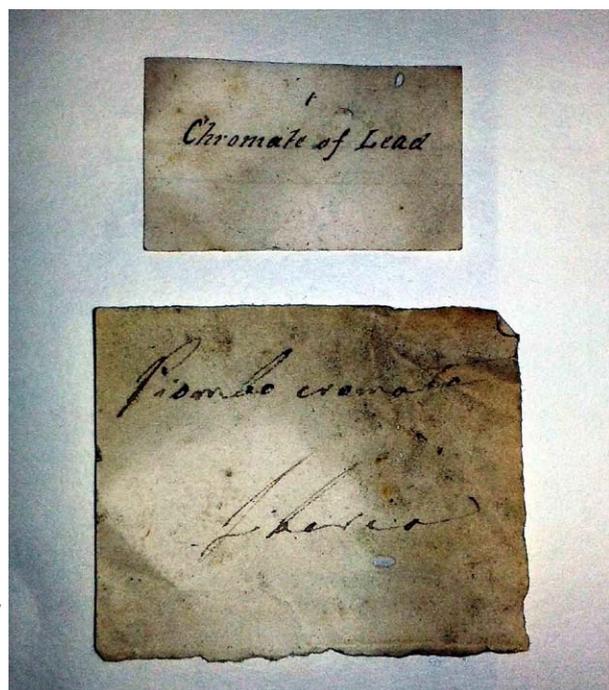


Figure 12.

specimens, but this collection serves as a classic example of why having labels affixed to the specimens is so important.

Tom Cotterell.  
Russell Society Conservation Officer.

## A Burning cliff on the Somerset coast

In late October 2012 I had been searching the beach just east of Blue Anchor for a range of minerals including gypsum (alabaster is common in nearby cliffs), calcite, strontianite, baryte, pyrite and fossils. I was born and brought up in West Somerset and this stretch of Jurassic age coast was one of the first places I started collecting minerals and fossils as a boy in the late 1960s.

I could smell what I thought was burning tyres from the farmland above an area of about 1.5 ha of active landslip. Near the top, at approximately [ST 0416 4361], I found an area about 50 x 40 m with about 20 fissures from which smoke and steam came out. The landslip was about two years old. The cliff is composed of dark grey and friable shale, with bands of harder rock about 60 cm thick. It is difficult to relate the strata to those exposed in the nearby cliff as the area has slipped so much.

Revisiting the area about eight times in the following years I found that the smoke/steam had ceased by April 2016, though in places the hillside was still rather warm. Deposited around some of them there were yellowish/brownish crusts, and all vegetation within about a metre of the main vents had been killed. This area of landslips can be rather hazardous due to deep sticky mud, and is now becoming overgrown.



The area of the burning cliff in January 2014.  
Tom Goodland Photo.

As far as I know this is the only example of such a phenomenon on the Somerset coast. Natural cliff fires occur on the Dorset coast three or more times a century (see a comprehensive article online by Dr Ian West). A cliff fire off the Dorset coast near Weymouth burned for “several years” in the early 19<sup>th</sup> century. Earlier records have been from the mouth of the River Shannon in 1753 and in Caernarvonshire, before 1827.

It is unlikely that the fire had anthropogenic origins. Fires can start from the oxidation of iron pyrites, which is common in at least one layer of rock exposed in the beach below. Counter-intuitively, increased levels of moisture have been shown to increase the possibility of these natural fires starting (Cole, 1975), and 2012 was an exceptionally wet year. The fractured nature of the shale is necessary for a fire to get adequate oxygen. Presumably the shale has a high hydrocarbon content.

At Kilve, about 12 km east of Blue Anchor, with similar rocks, there is shale rich in bituminous material (called kerogen). The oil in the shale there was described as “rather terpene-rich” (Cornford, 2004). Initial tests in 1916 had indicated an oil content of between 30 to 100 gallons per “cubic ton”. In 1924, commercial extraction was attempted, but yielded only 5-10 gallons per ton, and the project was abandoned.

The attached photo shows a part of the area in January 2014. If any other RS members have witnessed similar events at coastal locations I would be very interested to hear more (tomgoodland@hotmail.com).

### References:

Cole, Doug; (1975). Observations on a burning cliff. *Proceedings of the Dorset Natural History and Archaeological Society*, **96**, 16-19.

Cornford, Chris; (2004). Organic matter of the Liassic “oil shales” of Kilve, West Somerset. Abstracts of other papers/posters presented at the annual conference, January 2004, Ussher Society, page 72.

West, Ian; (2012). Burning cliffs of Dorset – oil-shale fires; [www.southampton.ac.uk/~imw/kimfire.htm](http://www.southampton.ac.uk/~imw/kimfire.htm)

**Tom Goodland**  
**Wales & West Branch**

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## A Report on the Mineral Finds from Penarth to Lavernock Point, South Glamorgan.

Members of the Russell Society have made several visits to this location over the years and are aware of the nice sky-blue crystals of celestine that can be found in rocks on the beach, together with the mineral strontianite as small acicular crystals. The rock type in which these minerals can be found, together with their locations, has now been recorded. Celestine has now also been recorded as cm-thick veins in the marls on the beach and in some of the calcite veins.

Both red and green marls underlie most of the beach between Penarth Head and Lavernock Point. In these marls at several locations we get fist-size nodules, which we have assumed to be calcite or quartz. By pure chance it was decided to dig out some of these nodules to see if they contained any internal crystalline structure. The nodules extracted were somewhat on the heavy side for calcite or quartz so a few were removed for further examination.

Measurements of their densities gave values around 3.6 gm/cm<sup>3</sup> and some simple chemical analysis indicated celestine. It appeared that these nodules are around 60 to 80% celestine. Under the microscope they look like a matrix of very small celestine crystals in marl. Further searching for these nodules have indicated that there must be tonnes of these nodules in the marls and loose on the beach; quite a surprising find. Their locations have again been recorded.



A specimen of celestine from Penarth Beach.  
Dave Wellings Photo.

This beach is also known for the beds of alabaster that have been quarried and used as ornamental stone at various locations around the area. The extent to which these outcrops occur has been recorded together with the location of the 19<sup>th</sup>-century alabaster mine. The location of other mineral finds including pyrite, selenite and quartz have been recorded.

**D. S. Wellings.**  
**Wales & West Branch**

### **Dr William Wavell FRS and his Wavellite Collection.**

I am collecting material for a talk at the Russell Society meeting next April in Buckfastleigh. I have made progress with research on the Wavell family having consulted the archives of Hampshire County which are located in Winchester. Andrew Wavell gathered information which he lodged with the archive during the 1940s but he mainly concentrated on military figures within the Wavell family. Archibald Wavell, 1<sup>st</sup> Earl Wavell and former Viceroy of India is descended from William Wavell of Barnstaple. There is still much to tell - and correct - about William Wavell.

What I really need now is to locate old specimens of wavellite that may have come from the Wavell family. Most of the Wavell Collection is currently 'lost'. I am now in possession of copies of letters from William Wavell and his two sons Rev. William Wavell (1779-1811) and Major General Wavell FRS (1785-1860). If anyone knows the existence of very old specimens, I now have handwriting samples to compare with any documentation that may still exist.

**David Ifold**  
**Southwest Branch**

## Branch Meeting and Field Trip Reports

### Friday 9<sup>th</sup> March 2018. North Branch March Meeting. Theme: Show and Tell.

The snow had gone and the roads were clear and the eight attendees reported no problems getting to the meeting. All brought something so 'show and tell' and the minerals and stories associated with them acted as catalysts for further discussions.

First up was a pair of potato stones brought in by Harry and Judith Holt, self collected, self cut, and self polished. Dulcote agate stone nodules, from a clay seam in a fault in the limestone quarry on Dulcote Hill, are known as potato stones due to their shape and appearance. When cut the nodules show a quartz lining, some also contain goethite needles, amethyst or calcite. The quarry, from which road stone and material for the building industry was extracted has been sold. A 'Meat Pie Factory' resides inside! They also had a slice of Cotham Landscape Marble, so called despite it actually being a limestone rather than a true marble. Harry explained the occurrence, which extends from Glamorgan, South Wales, through Bristol, and down to the south east coast of Devon. The lenses, usually around 3 cm thick can extend up to 3 m across! The 'landscape' produced by the growth of algae and wormlike organisms on the ancient mud-flats, these forming the dark 'hedges' and 'trees' rising from a basal layer, with the 'sky' being trapped mud.



Samples of "Cotham Marble" (left) and Dulcote Agate.

Harry showed a specimen from the Sweet Home Mine, a silver mine on Mount Bross, Alma District, Colorado. By 1965 the silver was 'running out' but this was when the 'Alma Queen rhodochrosite' was found by John Soles and Warren Good. At 10 cm high, the magnificent red crystal on matrix sold for just \$2,500! Unfortunately, in the next 13 years of operation, an estimated 90% of vugs encountered were barren, and there were only 5 vugs that could be considered profitable finds. For images of some of these finds see Min. Rec. July-August 1998 Vol 29 Number 4; the reconstructed Coors Pocket, shown on page 90, is impressive, at 8 feet by 7 feet and contains over 3000 individual specimens! Harry's specimen, purchased at the 2009 show in Tucson, neatly fits into a 2 x 3 box and is not the cherry red of others (the red crystals contain pure manganese and the paler ones have impurities of calcium) but this did make it affordable.

John Davidson had two specimens from recent collecting trips. The first, one of 50 pieces found on the trip, was a calcite free floater 10 cm long, from Cloud Hill Quarry, Breedon-on-the-Hill, Leicestershire. The rocks of the quarry are fossiliferous, showing brachiopods, crinoids, and corals. The calcite usually occurs in voids containing free floaters. These large and almost gemmy scalenohedral crystals have coatings and inclusions of chalcopryrite. John's second piece was from Loch na Lairige, Ben Lawers, Tayside, collected in June 2017. John took advantage of the drought, finding the loch much reduced in size, thus enabling the extended shoreline to be investigated. Boulders along the shoreline provide occasional specimens but this one is quite exceptional with chestnut brown terminated crystals of rutile to 50 mm.



Steve Warren had brought four trays from recent trips. The first contained several delicate baryte specimens from Brandybottle Incline, Old Gang Mines, Swaledale. The

Rich specimen of azurite and malachite from Dolyhir Quarry.

Brandybottle Incline actually consists of two tunnels on the moors by Arkengarthdale and Swaledale. These intercepted

a rich band of minerals, at the Friarfold Fault, containing galena, adding ore for the smelt mines in the area. Witherite  $\text{BaCO}_3$  alters easily to baryte  $\text{BaSO}_4$ , the acid generated by the oxidation of sulphide minerals dissolves the witherite and the sulphate produced combines with the released barium to form baryte. An image of one of the specimens is in Russell Newsletter Issue 72. The second tray, from Dolyhir Quarry, Old Radnor, Powys, contained specimens of azurite and malachite after chalcocite. Impressive specimens of hollandite and cryptomelane from Mynydd Nodol, Gwynedd in the third tray brought oohs and aaahs. The cryptomelane and hollandite both form botryoidal crusts, grey in colour. The hollandite occasionally occurs as velvet, metallic dark grey crystals lining cavities in the ore. Steve also had a fluorite from Pike Law, Teesdale. The extensive opencast and underground workings of the area were worked for lead, not fluorite, hence the opportunity to find these rich purple cubes, though Steve did say most are weathered and friable.

Susan Thompson showed two specimens, an aragonite from Llyncllys and an "aqua" baryte from Southam mine dumps near Pallafat, with a very interesting story of collection. The site was known but now, overgrown with nettles, brambles, bushes and trees, it was very difficult to get to it and to find the dumps underneath. Despite this the intrepid group managed to find one pocket in the dumps. Some of the finds were green on collection but turned colourless when exposed, however this aqua piece had retained its colour.

Ian Dossett had a large box containing minerals, also from recent trips. Lots of miles covered and quite a variety of minerals, including pectolite from Loanhead Quarry, Beith, fluorite from Coldstones Quarry, Yorkshire, calcite from Cloud Hill Quarry, Leicestershire, and kyanite from Craigoshina, Glen Esk, Tayside. All pieces were 'spare' and several were given new homes, the remainder being donated as prizes for the Scavenger Hunt. Thanks Ian.

The meeting closed rather late, due to the interesting discussions about the materials brought. A very pleasant evening.

### **Saturday 10<sup>th</sup> March 2018. Southern Branch Visit to Durnford Quarry [ST 535 714]**

**Leader: Chris Finch. Reporter: Roger Robinson.**

For the first Southern Branch field trip of the season, 7 of us enthusiastically attended wearing warm clothing suited for the weather forecast for the day. Unfortunately, this was not the most rewarding of visits. However as usual we could at least enjoy the high standard of hospitality by the Quarry Staff.

Firstly, we were invited into the office to view the quarry plans and the proposals for the rate of material being processed in a way that meets demand and best utilises the processing equipment. The plans showed where the Quarry was being worked and discussion indicated where the most likely rewarding mineralised material may be found.

We were ferried in and left to find our way around the benches as we saw fit. There was much sign of mineralisation in various parts of the quarry and at many levels, mainly of calcite, some quartz and iron staining. The attached photograph shows this. Unfortunately, there were very few cavities or crystals of "collectable" size. Some of our members resorted to carrying off arm-cradle size pieces under the pretext of contributions to a rockery. Others decided to transfer their interest to the abundant rugose coral fossils embedded in black limestone.

At the end of the trek, on being ferried back out we were invited to join the staff for tea or coffee which most gratefully accepted.

Despite the negative comments above, we did enjoy the opportunity to seek out treasures in such a likely environment for mineral samples. Thanks go to Tarmac for permission, the Quarry Staff for their hospitality and particularly Jan Armstrong, the Quarry Supervisor.



**The NE corner of the quarry at Durnford - "Where we used to find the rhodochrosite". Chris Finch Photo.**

**Friday 23<sup>rd</sup> March 2018. South West Branch Visit to The Museum of Barnstaple and North Devon.  
Leader and Reporter: David Ifold.**

The original planned visit to the Museum had to be cancelled due to a severe weather warning for heavy snow. As it happened, the leader was snowbound with other attendees expecting to traverse part of Devon with deep snow on the major roads. The Museum remained open as Barnstaple didn't see any snow!

Four of us were able to attend the rescheduled visit. The Museum is home to the Townshend M. Hall Collection as well as other collections. We planned to study the collection of wavellites prior our visit to High Down. The Museum is home to almost one hundred specimens of wavellite and variscite including some which are claimed to have been collected by the Hill family prior to 1785. We all agreed that some of the Museum wavellites are amongst the best known from the UK. Following our visit, I started working at the Museum as a volunteer and have been able to study the ledgers written

316	Wavellite	X	Filleigh	Found	g. No. 2361
317	✓	X	"	"	"
318	✓	X	"	"	"
318 1/2	✓	X	"	"	"
319	✓	X	"	"	"
320	✓	X	"	"	"
321	✓	X	"	"	"
322	✓	X	"	"	"
323	✓	X	Four of the original specimens found	Rec <sup>d</sup> J. G. Johnston	15. Ap. 1869.
324	✓	X	by Dr Wavell, and given by him to	"	"
325	✓	X	Dr Morgan, Dr Johnston's father	"	"
326	✓	X	"	"	"

**Photograph of the ledger listing specimens in the Townshend Monkton Hall Collection acquired by the Barnstaple Athenaeum in 1888.**



**Specimen of wavellite with variscite approx. 120mm maximum dimension. Alysson Rowan photograph. Perhaps a Dr William Wavell FRS specimen.**

shortly after the Museum opened as the original Barnstaple Athenaeum in 1888. The ledgers record that four or perhaps five specimens of wavellite that we examined in the Townshend Hall Collection were originally collected by Dr William Wavell FRS. Hopefully, more on this at a later date.

The Museum Collections can be searched online <https://ehive.com/collections/4559/museum-of-barnstaple-and-north-devon> I have been able to photograph the original ledgers which contain much more information regarding locations, date obtained and from whom the specimen came from.

Unfortunately, the Museum is now closed to the public as they are in receipt of funding for a major extension. It will open again in the Spring of 2019, although no date is yet fixed. We hope to arrange a further Russell Society visit in 2019 subject to the agreement of the Museum. Our thanks go to Allison Mills the Museum manager and her assistant Samantha Bevan. Photographs reproduced with permission from the Museum of Barnstaple and North Devon who retain copyright.

**Saturday 24<sup>th</sup> March 2018. Southern Branch Field Trip to Hampstead Farm Quarry, Chipping Sodbury, Gloucs. [ST 724 840]**

**Leader: Chris Finch, Reporter: Steve Plant.**

A party of seven members arrived for an early 8.00 a.m. start. We were fortunate to have the loan of one of their 4x4 pick-up trucks to ferry the group around the quarry, ably driven by our taxi driver and leader Chris Finch. Since our last visit there has not been too much new development work in the main quarry.

The bottom level was essentially devoid of the large boulder piles which used to be spread out at the sump level ready to be broken by the rock breaker. Some quarrying had taken place in the floor of the quarry but there was an absence of any minerals. Fortunately, a little development had taken place along the south-west face where the typical banded barytocelestine-pyrite-sphalerite-galena-calcite was observed *in-situ* and in the piles of spoil at the foot of the face. Concentric banded grey-red coloured barytocelestine was plentiful with some vugs yielding sprays and bow-tie crystalline aggregates. Some reasonable euhedral calcite crystals to 1-2 cm, perched on pyrite, were also collected. A

fair amount of galena was also observed in-situ and within the loose blast debris.

A new quarry extension, north of the main quarry, is now under development, this is called Brinsham Quarry. Whilst no collecting was permitted in this part of the quarry due to unstable faces we did take the opportunity to tour around the site in our vehicle and observe the faces for any mineralisation. As the quarry is working down from the surface much of the limestone is heavily eroded and much contaminated with overburden. Several baryte-calcite mineral veins were observed *in-situ*, but no major mineralised structures were observed. Some spoil tips did reveal signs of more substantial mineralisation, similar to that from the main quarry. Large blocks of barytocelestine-sphalerite-pyrite were found with up to 5 cm of solid pyrite enclosing banded barytocelestine and sphalerite. Hopefully, as the quarry deepens, it should reveal much fresher material and extend the life of the quarry well into the future and provide new mineral exposures.



6 cm. Sample of pyrite on baryte. Chris Finch Photo.

Many thanks to John the Production Manager and to Richard the Quarry Foreman for facilitating access on the day and the loan of the 4x4 pick up and to Quarry Manager James Veakins and Hansons for continuing to allow us to collect.

**Sunday, March 25<sup>th</sup> 2018. Wales & West Branch Visit to Sker Point, Kenfig, [SS 787 797] and Ogmores-by-sea, [SS 862 751], Porthcawl.  
Leader and reporter: Steve Plant.**

Nine members were in attendance on a warm sunny day, quite exceptional for the time of year. We were fortunate to have Dave Evans with us as he has been visiting Kenfig sands in search of potato stones over a period of thirty years. In this time period he has amassed a fine collection, some of which he brought along for people to familiarise themselves with before proceeding to find their own, see fig 1.



Fig. 1. A good specimen of a potato stone from Kengig, from Dave Evans' collection. Steve Plant photo.



Fig. 2. A selection of Dave's "spare" material which was distributed to members. Steve Plant photo.

Quartz nodules and geodes, sometimes referred to as potato stones were formed within the dolomitic and associated Keuper marls of upper Triassic age. They are thought to have been formed by the replacement of pre-existing nodules of anhydrite by silica-rich solutions. Potato stones can have either a solid infill, or partial resulting in internal cavities (geodes). The quartz lining the cavities can form as water-clear terminations, occasionally amethystine and with goethite crystals growing in or on the quartz. Other commonly encountered minerals such as calcite, baryte and rarely celestine can occur within the geode cavities. Dave Evans led the way through the Kenfig sand dunes to the beach. From Sker

point northwards the beach stretches for several miles towards Port Talbot. There is an extensive pebble bank at the top of the beach and where our search was directed. Amongst the millions of mainly limestone pebbles were found a few water-worn potato stones, most were only 2-5 cm in diameter, some with a geodic lining of quartz - nothing to compare with the quality of Dave's samples, it looks like one requires up to thirty years of beach combing to find really good ones. The party returned to the Kenfig Visitor Centre. Dave had brought along a box of his spare potato stones which he duly distributed to those who had not been successful or who wanted to improve the quality of their finds, see Fig 2.

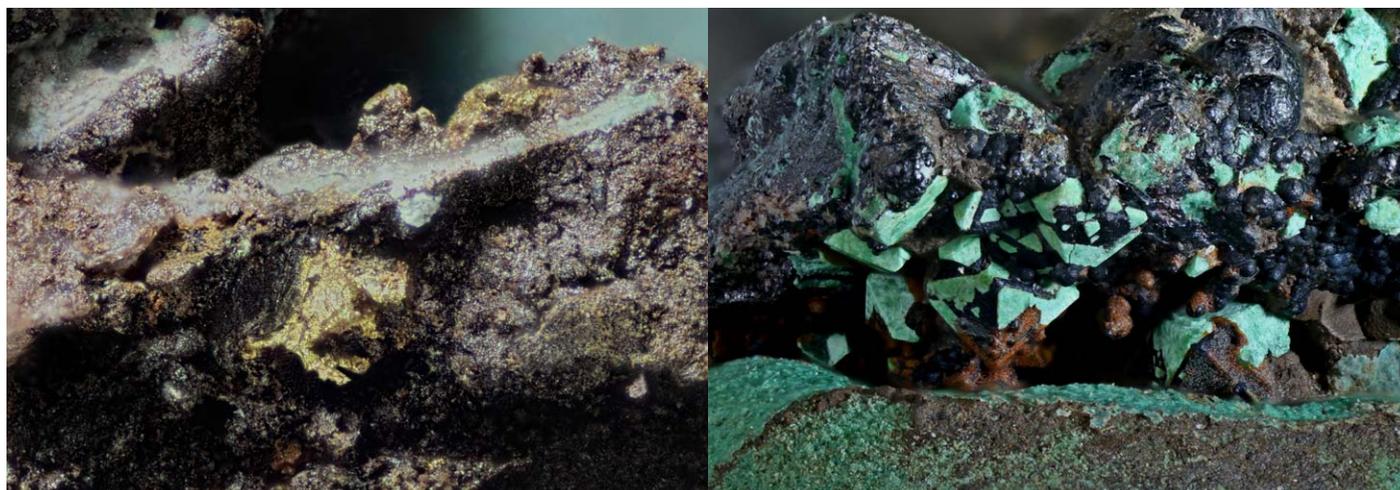
For the second part of the day the group travelled on to Ogmores-by-sea to examine the geology and mineralogy of the coastline. This part of the coast is an SSSI, noted for the Jurassic unconformity which also displays exhalative mineralisation, consequently no hammering of outcrops was permitted. Several small potato stones were also found here amongst the beach pebbles. *In situ* baryte-galena veins were noted amongst the base carboniferous limestone and also within the Triassic breccias. The mineralisation was particularly intense in the Slade Trough where baryte can be seen *in situ* replacing the fossil corals. Baryte, galena and calcite were also common as later replacement features within cavities at the junction of the unconformity.

**Saturday 31<sup>st</sup> March 2018. Southwest Branch visit to Bampfylde Mine, North Molton, Devon.**  
**[SS 738 328]**

**Leader and Reporter: David Roe.**

This year's trip to Bampfylde was a week earlier than usual – but it was in a winter that proved to be unusually extreme. The previous night had produced a flurry of messages – about Amber Weather warnings for Devon, early bird campers being flooded out on Exmoor and snow drifts threatened for north Devon. In Wellington's words at the Battle of Waterloo it was time to "Steady the Buffs" and eventually the decision was made to go ahead. Driving up to Heasley Mill in heavy rain, a temperature of 4°C and with the lanes awash with water and debris did make the Trip Leader wonder if it was the right decision. It was – as five hardy souls gathered at the car parking venue the rain stopped and the sun struggled to emerge – although the cold northerly wind continued to remind us that spring was still a long way off.

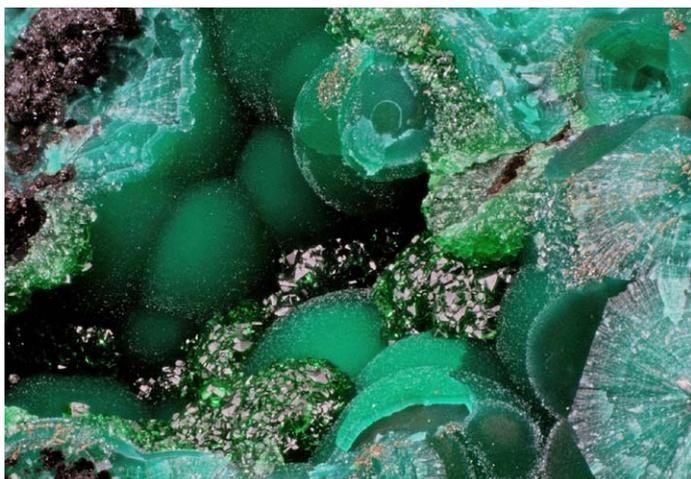
The river was crossed (with due respect for its swollen state) to the east side of the valley and at first glance little had changed on the site. One of us then dug a large hole in the bottom dump while the remainder of the party explored the lode on both sides of the valley. The winter rain had led to exposures of fresh rock in the paths and tips as well as washing away some of the red clay coating that is so characteristic of this site. As a result, it was one of the most successful collecting visits in the last decade with all of the party leaving the site well satisfied with their finds.



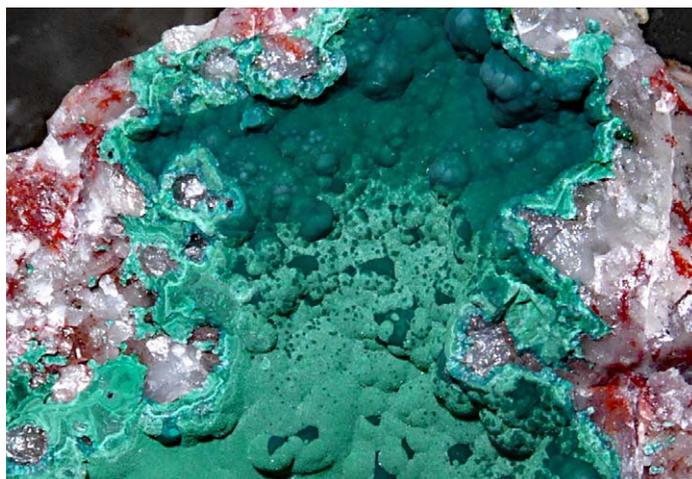
**Small, but definitely gold. The first from this location for a long time. Steve Rust Photo.**

**The putative epimorphs of cuprite. David Roe Photo.**

The most notable was Rupert Harrison's find of a small gold fleck on matrix – under high power magnification it certainly looks like the real thing and it is the first find of native gold on matrix at Bampfylde for many years. Rupert has a good eye for the unusual and also noticed a clutch of 1 mm opaque black epimorphs that are very suggestive of cuprite – where the crystals are broken they reveal a green crystalline interior which may be malachite (see David Roe's photograph). Another of Rupert's finds showed a very attractive light blue pseudomalachite which had coated an octahedron beneath. Steve Rust found a cabinet size classic specimen of malachite on pseudomalachite measuring 5 x 5 cm as well as libethenite, connellite and brochantite. In fact, most of us found a good variety of the Bampfylde minerals. Phil Taylor took away a large bag of fines from the tip with which he intends to have a very ochre stained few hours panning. He was



**Specimen of libethenite with pseudomalachite. 1 cm wide. David Roe Photo.**



**Specimen of pseudomalachite with malachite. 5 x 5 x 3.5 cm. David Roe Photo.**

appointed as our field trip geologist and remarked that the “micaceous hematite and a quartz shows distinct folds and ribs in the fabric of the material which I suspect is due to crenulation. This is something I have never before observed at this scale, as it usually occurs more at the macro or micro-scale, where an existing texture/fabric is overprinted through a change in localised *in-situ* stresses.”

Bampfylde is notorious for its micaceous red clay coating which obdurately appears preferentially attracted to malachite and pseudomalachite. It resists shifting by even the most vigorous ultrasonic cleaning – I have tried addition of detergent and surfactants such as Calgon with little success. Very dilute vitamin C for around 30 seconds followed by ultrasonic can assist but obviously it is a delicate balance between cleaning and acid attack on the malachite.

Our thanks to the Land Agents for the estate for allowing us access to this private land.

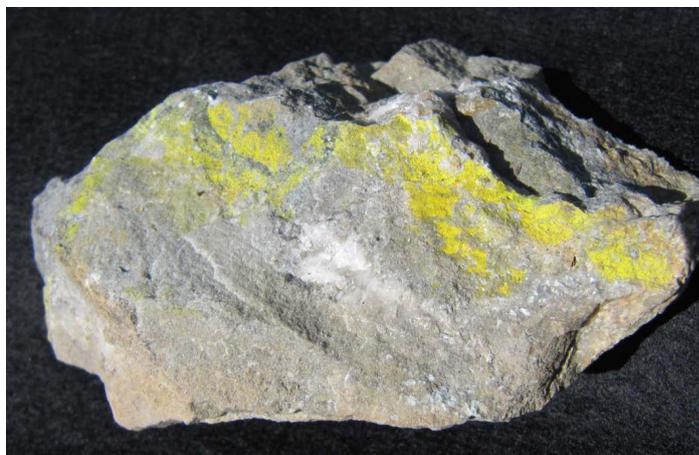
**Saturday 31<sup>st</sup> March 2018. Southern Branch Visit to Whatley Quarry [ST 733 483] Leader: Chris Finch, Reporters: Ross Whittaker and Chris Finch.**

After a 2-hour drive from Shropshire to get to Whatley for 07.30 (for an 08.00 start) I arrived nice and early to have a quick snooze in the car and then a cup of coffee before the other members started to arrive.

After being offered coffee and teas in the staff lunchroom we were invited in to the quarry ‘command centre’ where Oliver Ashton, the Production Manager and our host for the day, explained the quarrying process. This allowed every aspect of the quarry operations to be monitored on the numerous large monitors allowing the operator to effectively track the rock through the whole crushing process like some grand ‘Super Mario’ style computer game. The usual health and safety aspects were then gone through before we were chauffeured in to the quarry to start tapping away.

We started on Level 1 and had access to large rock piles which soon saw everyone dispersing over to see what they could find. There was plenty of calcite to be had, one of my favourite minerals, though not without a lot of hard work and though I left the quarry at midday with a large rucksack full, to meet my daughter at Frome Station for a lift home from Plymouth University, the end result once unwrapped was a little disappointing with either the specimens ending up in the garden or given away to young collectors at the Oxford Mineral show.

The rest of the members stayed on and proceeded to work their way to the lowest level, Level 7 and we had a look in to the new Level 8. We found fluorite on Level 3 and traced a sulphide vein from Level 5 to Level 7. This vein extended in width at the lower levels and it contained both galena and sphalerite. However, at Level 7 we found rich coatings of a yellow-green mineral which could be amorphous cadmium sulphide or greenockite or hawleyite. It is hoped that this can be confirmed in the future and could well form the basis of



**Potential greenockite, 8 cm across. Chris Finch Photo.**

It is hoped that this can be confirmed in the future and could well form the basis of

a subsequent report.

Our thanks to the Whatley management and Hansons for allowing us to visit Whatley. Special thanks go to Oliver Ashton, the production manager on the day for facilitating the access to all levels and to Andy, the new production supervisor who looked after us and ferried us around the quarry.

**Friday 6<sup>th</sup> April 2018. ASM visit to Cavendish Mill, Stoney Middleton, Derbyshire. [SK 205 752]  
Leader and reporter: Neil Hubbard.**

A small but select group of us met outside the offices of Cavendish Mill where we were greeted by Chris Large of British Fluorspar. Chris explained that the plant had only just started running again after several weeks of closure following a fire. We made our way to the stock piles of Milldam Mine material only to find that there was little recently mined material and it had not been yet been washed off by the rain and so collecting was difficult.



**Sometimes you just need a bigger shovel. Recovering the lump of galena from the tip. Neil Hubbard Photo.**

Typical samples of fluorite in small crystals from colourless to various shades of purple were collected along with minor smithsonite. There were a few large boulders rich in galena, one of these was recovered from the dump with the help of a digger, this was carried away and broken up for us. The galena showed very little alteration but there was some cerussite, a little anglesite and at least one greyish bipyramidal crystal of wulfenite. This was hardly a great visit but now the plant is in full production again, things should be better for our visits later in the Summer.

**Sunday 8<sup>th</sup> April 2018. Russell Society ASM visit to Bardon Hill Quarry Extension, Copt Oak, Leics. [SK 470 127].**

**Leader and reporter: Frank Ince.**

Given the possibilities for oversleeping after any excesses during the previous evening, and/or getting lost on the journey from Leicester to Copt Oak, it was a considerable relief to the field leader that all 18 members of our party congregated in the quarry carpark at 09.30 (more-or-less). We were met by our hosts (Eddie Bailey and Jemma Moore) and had the customary H&S briefing. The local geology has been described recently and will not be repeated here (see the September 2017 visit report in Newsletter 72).

We made our way to the perimeter of the quarry and it was obvious that there had been a lot of activity since our visit in September 2017. The lowest bench was now part of excavations for the foundations for the primary crusher (we would not be visiting this area). A considerable amount of overburden had been removed on the south side of the quarry and Eddie had arranged our visit so that we would have easy access to several sites close to the Precambrian-Triassic unconformity. We made our way to the top bench of this newly exposed ground, where the Precambrian volcaniclastic rocks are covered by Triassic Mercia Mudstones and/or glacial deposits. At this location [SK 4734 1234] the mineralogical pickings were rather meagre: colourless to white quartz, green micaceous chlorite, and a few cubes of pyrite (some as goethite ps.. pyrite). Nearby [SK 4732 1238] there was an interesting exposure of a vein of dark quartz-rich rock containing some deep red jasper (it will be interesting to see what this looks like after polishing); there were also a few thin veins containing very small crystals of lustrous, grey specular hematite with small colourless quartz crystals (Alpine-type mineralisation?).



**Figure 1 The Millett-Briscoe excavation that contained some copper mineralisation. Photo: Norman Moles.**

At this point our party split into two groups. One group stayed on the upper benches for a bit longer. The other group included some of our party who had been on the 2017 visit and they were very keen to revisit the area that contained evidence of copper mineralisation. This location was on a lower bench [SK 4711 1246]; in the 2017 report its location was quoted as [SK 4714 1243] which seems a bit odd (although, I had recently put some new batteries in my GPS device). The remainder of our time in the quarry was at this location and was given over to some energetic digging by a water-filled depression (Figure 1). Initially the excavation of this quartz-rich fracture zone was yet another Millett-Briscoe endeavour; it was subsequently enlarged by others. These efforts afforded modest amounts of a variety of minerals: small anhedral masses of dark red to reddish-purple cuprite with a few cavities containing minute crystals (some of the anhedral masses of cuprite contained wires of native copper), blobs and crusts of mid- to dark-green malachite, and greenish to bluish 'chrysocolla' (both as patches and a replacement of either cuprite and/or malachite). Cream dolomite, some black possibly Mn-rich dendrites and blobs, yellowish-green epidote and quartz were found nearby and the volcanoclastic rocks were also the host for some veins of cream to dark brown dolomite that contained cavities lined with small rhombs of colourless calcite.

Just after 14.00 we started our walk back to the quarry carpark; here, we all expressed our thanks to Eddie and Gemma for giving up their Sunday and being excellent hosts. We would like to thank the managers of Aggregate Industries (particularly Eddie Bailey, Head of Geology and Land Survey) for this opportunity to visit the quarry.

**Saturday 14<sup>th</sup> April 2018. Wales and West Branch Visit to Saundersfoot, Pembrokeshire [SN 136 048].  
Leader & Reporter: Tom Cotterell.**

Five members convened in the harbour car park in Saundersfoot on what was a lovely sunny spring day. We set out north along the beach in search of 'beetle-stones' – small clay ironstone nodules – and gemmy quartz crystals from the Coal Measures sandstones exposed in the sea cliffs. With the tide out, we were able to traverse the flat (or not so flat) rock exposures along the shore looking at the cliffs as we went for any signs of quartz veins.



**Group of quartz crystals collected between Wiseman's Bridge and Amroth. 4 cm top to bottom.  
Tom Cotterell Photo.**

Surprisingly, the beach north of Saundersfoot was full of flint – the source of which is unexplained. As we rounded Coppet Hall Point the steeply dipping sandstones were seen to be cut by a number of milky quartz veins, particularly around a steep narrow inlet where erosion had brought down the remains of what appeared to be a wall from high on the cliff top. Towards Wiseman's Bridge there were signs of small reddish ironstone nodules within some of the beds exposed in the flat rock on the shore, but none were broken open.

At Wiseman's Bridge a large concrete sea wall forms the back of the beach, but in places beds of sandstone have remained uncovered by the base of the wall. One of these beds contained small quartz veins within which signs of small (cm-size) gemmy crystals could be seen.

Further east a prominent, but thin, coal seam crops out in the sea cliffs. Beyond this thin quartz veins were evident in the high cliffs, but these were mostly completely filled with milky quartz. Continuing eastwards where an area of ancient landslip material was eroding onto the beach a

few sandstone blocks were seen to have cm sized gemmy quartz crystals attached. One reasonable specimen was collected at [SN 150 064].

After stopping for lunch, we continued towards Amroth. No obvious quartz veins were seen, but we passed another thin coal seam and some Coal Measures plant fossils were observed in a cliff-fall at [SN 152 065].

We retraced our steps to Saundersfoot but leaving the beach at Wiseman's Beach to follow the old railway route through a series of tunnels to Coppet Hall Sands due to the rising tide around the headland (Coppet Hall Point).

In all an enjoyable walk, but unfortunately, we are still no nearer to knowing exactly where the fine Coal Measures quartz crystals often labelled as 'Wiseman's Bridge, Amroth, or Coppet Sands' actually came from. Most of these were available during the late 1990s although another batch appeared in 2008.

**Saturday 21<sup>st</sup> April, 2018. North Branch visit to Coldstones Quarry, Greenhow, North Yorkshire. [SE 125 641]**

**Leader: Steve Warren. Reporter: Nick Millett.**

A bright crisp morning greeted 10 members, including Bob Bucki a 'newbie' to field trips and Kevin Garrod who had driven up from South Wales.

After the usual health and safety talk and an introduction to the new Quarry Manager Richard Green, we followed the track down the northeast edge of the quarry to the previous year's major find. Unfortunately, all had disappeared apart from a wall of calcite flowstone overlying small pockets of hemimorphite.

We continued down into the quarry to inspect an old exposure on Garnet Vein. Some fluorite with galena was seen but not collected as it was very friable and weathered. A few baryte roses were found but these were also very weathered

We continued further down into the quarry to inspect a previous working on Sun Vein, that we found to be buried. Handily, an excavator was located nearby and Richard kindly opened up several trenches across the vein. We soon started to find *in situ* fluorite but it was somewhat corroded and ochreous. Kevin Garrod felt he could find something better elsewhere and was rewarded with a lovely cockscomb baryte cluster set on purple fluorite from a recent blast pile further along the bench.



**A little help in opening up the Sun Vein. Thank you Richard!**



**Specimen of baryte on purple fluorite. Kevin Garrod Photo.**



**Specimen of possibly cadmian smithsonite. John Chapman Photo**

Back at the Sun Vein trench John Davidson found smithsonite and possibly cadmian smithsonite. As luck would have it, Ian Dossett found a rather nice specimen right at the last minute.

Time was running out so we headed back up the long ramp to the car park where we gave our thanks to Richard Green for allowing us into the quarry. Hopefully a good day was had but I believe it was not as productive as last year. Maybe next year!

**Sunday 22<sup>nd</sup> April 2018. Southwest Branch Visit to High Down SSSI, Devon [SS 653 289].  
Leader and Reporter: David Ifold.**

The trip is an annual event for four of us and on this occasion, we were joined by new member Tony Brook. This year, the trip to High Down was planned to immediately follow the trip to see the very fine wavellites in the Museum of Barnstaple and North Devon. We had hoped that the approach of having two related trips together would encourage members from further afield to attend.

Unfortunately, a severe weather warning for snow and ice saw both trips postponed and alas it became impossible to reschedule the dates together. We had hoped to study the matrix of the 'old time material' and then immediately compare it with what is to be found in the quarry. There are in fact three quarries around High Down that have produced wavellite and also additional locations further to the West.

On our visit, each attendee found wavellite. Rupert Harrison explored the central area where the quartz ribs are and succeeded in collecting wavellite hemispheres on white quartz. I explored an area which I believe to be the oldest part of the quarry where important material was collected two hundred years ago but was thwarted by thick roots. Most of the modern material has been collected from areas where iron staining can cause problems.

A successful trip which will be on offer next year. Thanks to Ms. Andrews and Sam Kirkness of the Castle Hill Estate Office and of course to 'the family' who are always consulted. Thanks also to Nick Packer of Natural England.



**Alysson Rowan specimen and photo; collected on the joint BMS/Russell Society visit 2018.**

**Thursday 3<sup>rd</sup> May 2018. Southwest Branch Visit to Lundy Island, Devon.  
Leader and Reporter: David Ifold.**

This trip was a late addition to the SW Branch programme. There has never been a Russell Society trip to the island and we were interested in the scree slopes on the eastern side of the island which contain material rejected from the quarries when they worked in Victorian times. We were given permission by the Landmark Trust who run the island on behalf of the National Trust to collect material providing we did not damage the solid geology and did not take hammers. These conditions were volunteered by me as I knew miarolitic material still existed in variously shaped blocks.



**Sika Deer watch members of the Russell Society.**



**Beryl with topaz, slope below VC Quarry, Lundy, Devon.  
Max. field of view about 16 mm.**

Four of us set sail on the MS Oldenburg from Bideford Harbour for Lundy. The ship is run as a ferry by the Landmark Trust and every two weeks there is a return trip that allows between 7-8 hours on the island. April and early May are the ideal time as bracken obscures the ground later in the year. Everyone took home something; although the beryl in the picture was only revealed by soaking the rock in bleach to remove the lichen and moss. Thank you to Dean Woodfin-Jones (Senior Resident Warden) and Rob Large (Natural England) for agreeing to our visit.

**Saturday 3<sup>rd</sup> June 2018. Southern Branch Visit to Stancombe Lane Quarry, Flax Bourton, Bristol.  
[ST 504 681]**

**Leader: Chris Finch. Reporter Michael Dunmore.**

On warm and sunny day, six Society members looked forward to exploring a quarry which has previously yielded small

vugs in limestone containing calcite, dolomite and small, purple fluorite crystals. So, would we be in luck today? The quarry is very active, giving us further anticipation of picking over recently worked areas.

The group was fortunate in being allowed to explore the benches from top to bottom. After the safety briefing, Courtney, the quarry supervisor kindly drove us to the start point of our exploration at the top of the quarry. We were also shown a large area that is being prepared for quarrying; adding extensively to the working area of the site.

Our early investigations of the upper benches revealed a lot of limestone with calcite intrusions, but nothing to encourage extensive hammering. The middle and lower levels of the quarry proved more fruitful, with vugs of cream-coloured calcite crystals, and for the palaeontologists, some fossilised coral. A decent vug of bright red calcite covered with globules of bitumen was found by the field trip leader on the lowest level – Level 4.



**A large vuggy boulder about a metre across full of calcite. A specimen of red calcite from Level 4. Chris Finch Photo. Chris Finch Photo.**

Hand specimen-sized calcite specimens were collected by many; proving to be the most successful finds of the day. These were found on Level 3 and were first found in 2016. Many of the specimens collected were for Chris Finch for giving away at a Quarry open day in September – let's hope that some become Society members in the future!

Unfortunately, the fluorite crystals eluded us, but the calcite specimens proved satisfying for members of the group.

We would like to thank Courtney for his support and hospitality on the day and to Tarmac and the quarry manager, Neil Hoddinott for giving us access to the quarry.

**Saturday 5<sup>th</sup> May 2018 North Branch Visit to Llynclys Quarry, Llanyblodwel, Nr. Oswestry, Shropshire. [SJ 264 241]**

**Leader: Ian Dossett. Reporter: Susan Thompson.**

This was originally scheduled to be the Dolyhir Quarry field trip. However subsequent to an accident suffered on a university group visit in 2017, the quarry management has cancelled visits for the present. Consequently, and at short notice, an alternative field trip was arranged with Llynclys quarry.

In the event it was the bank holiday weekend, glorious sunshine and 7 members of our Society were ready to explore the quarry. Following our safety briefing by both Ian and then the quarry management, we set out to review the bottom level of the quarry. We were told the last blast had been just before Christmas, so there was new material unearthed since the last visit by the Central Branch in September 2017. The quarry is however switching from quarrying fresh material to working old waste for useful stone for the next 3 years. Thus it is likely to be only a limited source of new material.

The first material to be found as we worked our way around the bottom benches was minor malachite on sulphides. We moved our way up the quarry and Ian remembered the location of malachite from a previous visit of several years ago. We were able to unearth the remnants of the vein and after some digging we all shared samples of earthy malachite. Other minerals found were traces of chalcopryrite and possibly cuprite.

We walked to the adjoining quarry early afternoon, Ian spotted some minor malachite in calcite, with what looked under a lens to be arborescent native copper inside the calcite. John Chapman and Chris Finch both found nail head calcite. John Davidson found an unusual coral in the limestone. We left the quarry at 15.30 to make our way back home. Our thanks go to Malcolm Roberts of Tarmac for granting us permission to visit and collect at Llynclys and Ian for organising the trip.

**Saturday 12<sup>th</sup> May 2018. Central Branch visit to Breedon Quarry, Breedon on the Hill, Leics. [SK 406 236]**

**Leader and Reporter: Neil Hubbard.**

After the usual signing of paperwork, our guide for the visit Stuart introduced his young assistant Bradley and then we set off down the quarry to level C, the bottom bench. Although the lower levels of the quarry are disused there is still plenty to see. The area in the East face which has been producing calcite for the last few years was soon being worked for specimens and the frenzied activity soon started to produce a selection of calcite groups, some with chalcopyrite inclusions and some liberally sprinkled with balls of malachite. A large cavity further along the face was also dug out but only produced large specimens covered in small calcite crystals.

Some of the party then tried the west side of the next bench up in the hope of collecting galena and other lead minerals. Much hammering by David Green produced a few small galena cubes coated with cerussite and also a couple of wulfenite crystals. The rest of this bench was carefully examined but only produced a few small specimens of dolomite.

Towards the end of the visit, Peter Briscoe started to dig in the scree near the main calcite area and found a calcite vein which had open cavities which were filled with red mud. Once the mud had been washed off, the calcite, which also had some associated malachite, turned out to be some of the best collected during the visit.

By the end of the visit our bags were surprisingly heavy and so it was a relief that Stuart transported the bags - and anyone who did not want to walk - out of the quarry back to the cars.

We would like to thank Stuart and Breedon Quarries for allowing the visit.



**Cavity in calcite vein with mud infill.  
Peter Briscoe Photo.**

**ERRATA.**

It has been pointed out that in the last issue (No. 72, March 2018) the photograph accompanying the report from the North Branch visit to Milldam Mine on page 34 was mis-labelled. The collector working underground was Nick Millet (not Nick Frost) and the photo was taken by Clive Minker (not John Davidson). My apologies for this confusion.

**Editor.**