



THE
MINERALOGICAL SOCIETY
OF
NEW SOUTH WALES INC

C/o School of Natural Science
B.C.R.I. Parramatta Campus University of Western Sydney
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NEWSLETTER

MARCH 2014

The March Meeting will be held on Friday the 7th of March at 7.30 p.m. in the LZG14 lecture theatre on the ground floor of Building LZ in the Science campus of the University of Western Sydney on the corner of Victoria Road and James Ruse Drive in North Parramatta.

The program at the March Meeting will include a report on this year's

Tucson Show 2014 followed by a lecture on : -

'My Recollections of Mt Isa – The Mine in the Spinifex'.

Both the report on Tucson and the lecture will be given by **George Stacey**.

Members are invited to bring in a selection of **Mt Isa minerals** to help illustrate the lecture.

FORTHCOMING MEETINGS

Meetings will be held on the first Friday of each month throughout the year except before the long weekends of June and October when it will be held on the second Friday. Some of the following programs and speakers are still to be confirmed and subject to circumstances some changes may have to be made in due course.

April 4th: Member's display of Skarn Minerals with a lecture by David Foster on : -
'Skarn Type Mineral Deposits'.

May 2nd: **Member's Mini-Auction**

It is suggested that members could start sorting out their surplus specimens from now on for the Mini-Auction in May. In order to provide a sale list in advance of the Auction, information on specimens should be provided to Jim Sharpe ideally by about two weeks before the Sale.

June 13th: (Second Friday). Lectures by Peter Williams on : - **‘Polymorphs. A Mineral Enigma’**
and by Noel Kennon on :- **‘Ultra-Small Minerals and How We Can See Them’**

July 4th: Talks by Gary Sutherland and John Rankin on : - **Some British Mines & Minerals:
Part II.**

August 1st: Society A.G.M. and Betty Mayne Memorial Lecture given by Lin Sutherland on : -
‘Indian Zeolites’.

September 5th: Lecture by Rob Barnes on : - **‘Mineral Deposits in NSW’.** To be confirmed.

October 10th, (Second Friday) : Lecture by Graham Ogle on : - **‘Långban, Sweden – Rarity and
Fluorescence’.**

November 7th: Lecture by Brian England on : - **‘Kulnura Zeolites’.**

December 5th: **Christmas Social.**

The SOCIETY COMMITTEE

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Correction note: The Treasurer’s telephone number was given incorrectly in the February Newsletter. The above number is the correct one.

WELCOME

Welcome to new members Glenn Brown of Epping
and Stephen Pietrzak of Pendle Hill

2014 Society Membership Fees: REMINDER

Society membership fees were due from January 1st and a number of Society members financial for last year have not yet renewed their subscriptions for 2014. Members are urged to consider whether they have renewed yet and if not, to do so as soon as convenient. Subscription renewal forms were sent out in December or are available from the Secretary or Treasurer at any Meeting.

Subscriptions may be paid by : -

Direct Credit / bank transfer to the Society's account : - the Mineralogical Society of NSW Inc.
BSB: 062016; Account number: 28023647;

by sending cheque or Australia Post Money Order to the Treasurer or Secretary;
or by cash or cheque delivered to the Treasurer or Secretary at any General meeting.

Members are requested to submit a completed membership renewal form with their subscriptions wherever possible including e-mailing copies to the Treasurer or Secretary if they pay by bank transfer, particularly if any of their details, addresses etc, have changed. It is important for the Society to keep up-to-date records of the membership.

Members are advised that whilst the Society has guaranteed to register all members for **Personal Accident Insurance** this is subject to them being financial for the current year. Insurance cover will lapse if the member has not paid their 2014 subscription by March 31st and in order to avoid last-few-day payments the Society will not guarantee to insure members whose subscriptions are received by the Treasurer or Secretary after 23rd March. After this date the member will not be covered by insurance until the subsequent September 1st.

Membership infers one person to be insured but if a member wishes in addition to insure one or more family member/s they must pay an extra \$5 per person who must be named on the subscription form. Family members can only include spouse/partner and children.

The GEORGE SMITH BOOK REPRINT

Members are advised that copies of the reprint of the 1926 book '**A Contribution To The Mineralogy Of New South Wales**' by **George Smith** will be available for sale at the Society General Meetings for \$40.

Buyers who are unable to attend Meetings or are outside Sydney or interstate may send an order to the NSW Society Secretary requesting books by post. The price will be \$40 plus \$15 regular postage, (to anywhere in Australia). Cheques, money orders etc should be made out to : – the **Mineralogical Society of N.S.W. Inc.** Buyers sending in orders by post should allow up to ten days for handling, packaging etc

Orders should be sent to : - George Laking Secretary,
The Mineralogical Society of NSW Inc.
58 Amazon Road
Seven Hills
NSW 2147

Or by e-mail to : - bglaking@tech2u.com.au

Payments for book purchases may also be made as for Society membership subscriptions by Direct Credit / bank transfer to the Society's account : -

Mineralogical Society of NSW Inc. BSB: 062016; Account number: 28023647

FEBRUARY MEETING

At the commencement of the Meeting Graham Ogle reported that the **Micro-mineral Group** would be meeting at his house in North Epping on the following day. The theme of the meeting would be copper minerals and there would be several microscopes available to examine specimens. The Group meets about bi-monthly and visitors were welcome.

Two speakers, Dieter Mylius and Noel Kennon, had been scheduled to speak on the program subject for the evening, reporting on sites they had visited on trips to the U.K. Later in the year other speakers will give lectures on other sites visited during their respective U.K. trips.

'Some British Mines & Minerals. Part I'

Dieter Mylius

One interesting site among a number visited by the speaker on a trip to the United Kingdom in July 2011 was to a small village in Argyllshire in Scotland named Strontian. Mining activity at this site provided ores which upon later processing and analysis gave the World the name of the element strontium and the type minerals strontianite and brewsterite.

Strontian is a small village on the north shore of Loch Sunart which is open to the sea on the west coast of Scotland. The name is derived from the Gaelic '*Sron an t-Sithein*' which means 'point of the fairies'. There are a number of mine sites a few kilometers to the north of the village including the Corrantee, Middleshop, Bellsgrrove and Whitesmith mines with mining for lead, silver and zinc ores having commenced about the 1720s and continued intermittently up to the early 1900s. Latterly in the 1980s some deposits were re-opened up and worked to recover barium ore which had become significant for use by the North Sea oil industry.

A number of views of the village including the small general store were displayed and then views of some of the mining sites. The speaker noted that the countryside was very attractive and travelling was very easy on roads which were well-maintained but mainly single lane. So when approaching a vehicle from the opposite direction motorists would have to pull well over to pass each other.

After initially describing aspects of the general geology of Scotland the speaker indicated on maps the location of Strontian and noted that there are a number of other mining sites through that part of Scotland. The village is about 35 klm from Fort William and about the same distance from Tobermory on the island of Mull, another old mining area with a number of sites some of which have provided the type minerals mullite and tobermorite. Overall the west Scottish mines have provided a substantial variety of minerals, some very rare.

In visiting the local Bells Grove quarry near Strontian Dieter Mylius was pleased to discover that whilst he had expected to obtain micro specimens from dump areas there were a number of larger specimens, notably of calcite, to be found. He was also able to find some epidote, microcline and prehnite. He had brought a number of the specimens in to display.

Moving to describe the mineral chemistry the speaker indicated that the type mineral strontianite is a carbonate, SrCO_3 , and brewsterite is a zeolite containing some strontium. Strontianite was the first type mineral identified in Scotland and in fact the first in Britain. Miners and early chemists had recognized that the Strontian ores exhibited properties suggesting the presence of an unknown element which was later purified, identified and named by Sir Humphry Davy in 1808. Strontium is element number 38 and is the fifteenth most abundant element on earth. The pure metal is highly reactive and would never be found in native form but occurs mainly as celestine, strontium sulphate, with very little as strontianite but also as a minor constituent in about 160 other minerals including many zeolites.

Brewsterite is named after the Scottish physicist, Sir David Brewster, who invented the kaleidoscope, worked on polarized light and described the mineral in the 1820s.

Commercially strontium as the hydroxide has been used by the sugar industry to help crystallise the sugar. It has also been used in some quantity with barium and lead incorporated into the glass of television cathode ray tubes to cut down x-ray emissions although this use is becoming out-dated by advancing technology. Strontium salts are also used to provide red colours to pyrotechnic - firework, displays and also for some medical purposes.

In conclusion Dieter Mylius displayed a number of images of specimens he had collected and also images obtained through the Internet of specimens recovered from the Strontian mining area. These included strontianites which can occur in brown or green colours, brewsterites, calcites in a variety of forms, the rare zeolite harmotome, heulandite, pyrite and goethite.

A Disturbing and Disappointing Report on the Mont Saint Hilaire Mineral Site

Noel Kennon

Before he commenced his scheduled lecture Noel Kennon presented a disturbing and disappointing report on the current situation regarding the important Mt St Hilaire mineral site some forty kilometers from Montreal in Canada which he wished to bring to the attention of members. The site is a World-famous mineral locality because of a great number of rare and exotic mineral species which have been recovered there.

(Ian Graham gave a lecture to the Society in November 1999 about Mont St Hilaire, describing it then as 'a phenomenal mineral deposit thoroughly justifying its description as Nature's Treasure House').

Noel Kennon had discovered through the Internet that the Mont St Hilaire quarry which had been owned by the Poudrette family company changed ownership in 2007. The new owners have changed the name of the quarry to the 'Carrière Mont Saint-Hilaire' and have proved very resistant if not hostile to any approaches by mineral collectors to enter the site, even just to take photographs. Only three visits by collectors have been allowed since 2007 and then under very strict supervision. Apparently when members of one visiting party wandered away from the main group to take photographs of another area of the workings the whole group was immediately ordered out of the property.

The quarrying company operates on a twenty-four hour basis during all the (northern) summer months, April to November and for the six years since the change of ownership all rock has gone through the crushing machinery with no attempts to look for or preserve any mineralised material. Two levels of the best mineralised and most mineralogically significant or interesting areas in the south-east corner of the workings including the Poudrette pegmatite zone have been removed and are now flooded. Future collecting is uncertain.

In contacting an acquaintance in Montreal Noel Kennon was told that the new owners have no interest in or do not care about the scientific loss. He was told that the organizer of outings for the club that the contact belonged to was working on trying to obtain access to the quarry this year but with no guarantee of success. The contact also reported that currently the Canadian federal government is looking into the construction industry in Quebec about which there have been allegations of political cronyism and infiltration by organized crime. The contact also reported that during a club outing three years ago she and a few other club members had met the previous owner, Mr Poudrette, who had informed them that he had lost his company due to pressure from a construction industry organized crime senior figure.

Noel Kennon had no further information on the prospects for the Mont St Hilaire site being preserved and collecting parties being allowed to examine the workings and collect specimens in the future but no doubt many mineralogists and collectors will be following developments with concern.

The Herodsfoot Mine in Cornwall

Noel Kennon

The Herodsfoot silver-lead mine in Cornwall has been a substantial source of the metals in the past and also a premier source of World-class mineral specimens particularly of bournonite and tetrahedrite. On a trip to the U.K. in 2013 Noel Kennon and his wife Ann were able to visit the mine, touring the remains of the workings and examining the dumps. A number of images were taken on their trip and with a large number of others taken from museum and other collections from articles and sites on the Internet Noel had compiled a substantial visual presentation about the mine site, the operations, history and particularly of the wealth of fine minerals produced there.

The Herodsfoot village is in southeast Cornwall, the nearest town of Liskeard about six kilometers northeast and Lanreath about six kilometers to the southwest. The name Herodsfoot came from the Cornish for 'long hill' and went through several alliterations becoming 'Heriard' about 1500 and then several more before it became the modern version of Herodsfoot, 'the foot of the long hill'. The village is situated on the southern margin of two metaliferous regions, of north-south trending veins of lead-silver and east-west veins of tin. The mines of Herodsfoot, and the nearby Trelawney and Wheal Mary Anne are the three lead-silver mines in the area; the others are all tin mines.

Mining has been conducted in Cornwall for over four thousand years but in the Herodsfoot area was hampered by the water table and substantial mining only got underway in the mid-1800s aided by the application of steam engines pumping the water out, mining then being then conducted continuously for about forty years. The ores were very rich and the mines provided employment for many workers who came in from all over the area many walking to work to and fro some 6-7 miles each day from the nearby towns. The main mine shafts in the north and south ends of the mine area eventually went down to about 1,000 and 1,200 feet. Herodsfoot village became quite large with a number of facilities being set up to cater to the mine workers including a new church, bakery, other shops and the inevitable drinking establishments. Apart from the mine itself a gunpowder works was built in the village.

Mining activity largely wound down about 1910 leaving much of the mine constructions intact and images taken around that time and found through the Internet were not much changed from those taken by Noel Kennon during his visit there except for the dumps having acquired a cover of vegetation.

The peak period of mining and metal production was during the 1850s to 1880s and the mine became famous not only for its high production of metals but for the finding of many very fine and some spectacular specimens of the minerals bournonite and tetrahedrite, and a number of images of these specimens from Herodsfoot were shown, now in various collections all over the World. Bournonite is a lead, copper, antimony sulphide, PbCuSbS_3 often called 'cogwheel ore' from the shape of its crystals and tetrahedrite is a copper, iron, silver, zinc, antimony sulphide $(\text{Cu,Fe,Ag,Zn})_{12}\text{Sb}_4\text{S}_{13}$. The tetrahedrite from Herodsfoot was found usually coated with chalcopyrite. There have also been a large number of other minerals produced from the Herodsfoot mine, many being eminently collectable

At this time in the 1850s and with news of the discovery of the high-quality specimens a local mineralogist and collector, Richard Talling, came on the scene. He lived only about ten miles to the west of the mine and had become the doyen of Cornish mineral dealers having accumulated tens of thousands of specimens from the Cornish tin mines. He came hot-footing to Herodsfoot at the news of the fine specimens being found there and made so much of a pest of himself approaching miners and badgering them to look for specimens and hand over their finds that he was asked to stay away!. He overcame this problem by buying some shares in the mining company and as a shareholder had to be given access to the property and presumably to the miners. Over the period from 1858 and 1868 he was able to rescue thousands of specimens from the mine processing which without his activities would have all gone through the crushers. In spite of these commendable efforts if his name is entered into the Internet many references will appear for specimens which he had collected but no pictures of the collector himself.

Bournonite certainly occurs in many sites around the World including in Australia at Broken Hill, perhaps unsurprisingly associated with tetrahedrite and some small specimens of bournonite have been found at Tollwong but unquestionably the Herodsfoot specimens are the World's best. Noel Kennon then proceeded to show a number of images of bournonite, tetrahedrite and other Herodsfoot specimens in collections such as in the British Museum, the Cornish Museum and others in Cambridge, Scotland, Wales, the Royal Geographical Society, the Carnegie Museum of Natural History in Pittsburgh, U.S.A. and the Albert Chapman Collection in the Australian Museum.

The speaker next referred to Roy Starkey and the Russell Society of which Starkey is President. The Russell Society is a leading British institution devoted to the preservation of classic, ancient and important mine sites. An article on the Herodsfoot mine by Roy Starkey was published in the July/August 2012 Mineralogical Record. It stressed that visitors to the mine would need to get permission from the current land-owner to enter the property. Since the author had added his e-mail address to the article Noel Kennon was able to send him a message asking for information about obtaining the requisite permission. This elicited the reply that he had forwarded the inquiry on to the current owners of the Herodsfoot property, Richard and Francis Humphrey. Upon contacting them the speaker was pleased to receive a reply to the effect that the owners would be delighted to welcome the Kennons to their farm and that they were welcome to examine the mine site. The speaker confessed to being 'blown away' by the thought that some land-owners anywhere would have a mine site such as Herodsfoot 'in their back-yard'.

The Kennons clearly made quite a thorough job of visiting Herodsfoot during their trip to the U.K. in 2013 picking up a hire car at Heathrow Airport outside London and then driving down to Cornwall and making their way to Liskeard where they had booked accommodation. Then off in the morning only a short distance to the village, the visitors noting the feature as in much of England when travelling away from the main roads, of 'green canyons' - narrow single-track lanes hemmed in with high hedgerows.

Arriving at Herodsfoot they introduced themselves to the Humphreys by then living in the farmhouse which had originally been the Count House for the mine but had been extended by previous owners. The Humphreys had been working in France and in returning to England in about 2006 purchased the Minehouse Farm which comprised about fifty acres and included all of the remains of the Herodsfoot mine workings. Also included in the property were all of the dumps of about three acres in area and which have been substantially untouched for 150 years. Richard Humphrey was not interested in the Herodsfoot minerals, his passion being Cornish cassiterite and he has been trying to amass a collection of specimens from every deposit large or small in Cornwall that has yielded any of the mineral. He is however also trying to improve the mine area and preserve the remaining buildings to prevent further deterioration. Among other tasks the owner is trying to locate the original line of lode by arranging to excavate trenches with a backhoe and by using ground-penetrating radar.

The Kennons were able to work on the dumps for some two days initially in dry weather but after only half an hour it started to drizzle and then rained steadily the whole of the first and second days and into the third. This conveniently had the effect of washing specimens that were being picked up but otherwise the collectors, their clothes and equipment became thoroughly soaked. In the event they were able to return to Australia with about three kilos of well-washed Herodsfoot specimens. Gradual careful breaking up, cleaning and microscopic examination revealed some pyrite, cerrusite, chalcopyrite, octahedral galena crystals and one small crystal of what the speaker thought was probably bournonite.

A short time after their trip to the U.K. the Kennons received an e-mail from Richard Humphrey who reported that in continuing to work on his property he had directed the backhoe to clear the debris from an area adjacent to their collecting site and had started to find specimens. These included a fairly large piece of material with bournonite, another of a pseudomorph of quartz after barite and another with more bournonite. Two days work had provided four specimens each several inches across and the owner had reported that he was continuing the work with more specimens gradually turning up. The speaker expected that Richard Humphrey would be placing the Herodsfoot specimens on sale after cleaning them in order to generate funds to help support the work he was doing on the development of the site and restoration of the buildings. As an example of what prices Herodsfoot specimens might bring today the speaker showed an image taken from the website of a dealer in 2010 of a small specimen with a price tag of US\$2,800 or about AU\$3,500 at that time.

In conclusion Noel Kennon advised that the work at the Herodsfoot mine site was continuing under the care of Richard Humphrey and his friends and of various groups including the Russell Society. Visitors were always welcome to view and tour the site with also the possibility of a collector being able to turn up an important specimen. Contact details could be provided by the speaker.

FORTHCOMING EVENTS

MINERAMA, The Northern NSW Annual Gem Show

At the Services Club, Glen Innes, over Friday 7th, Saturday 8th and Sunday the 9th of March 2014.

The Minerama is held annually over the second weekend of March at Glen Innes, NSW. The show is one of the largest in NSW and will be attended by a large number of dealers in gems, lapidary material, minerals, fossils and jewellery. Field and fossicking trips will also be arranged.

HOBART GEM & MINERAL SHOW

Over Saturday from 9.00 a.m. to 5.00 p.m and Sunday, from 9.00 a.m. to 4.00 p.m. on the 15th & 16th of March, in the Grandstand Hall, Hobart showground, Glenorchy. Admission \$5 (adults).

Displays of Gemstones, Minerals, fossils, lapidary work, crystals, jewellery and for sale.

For more information telephone 'Rose' on 03 6249 1408

The 22nd Annual Gem & Craft Show

The New England Lapidary and Fossicking Club Inc.

Saturday March 16th in the Armidale Showground. 9.00 am – 4.00 pm

'See a spectacular array of Gems, Opals, Fossils, Rocks, Crystals, Jewellery, Gifts, Crafts, Beading, Lapidary Supplies & Equipment, Books, Leather/Wood Craft and much more.'

"For details contact the organisers on (02) 6778 5122; after hours e-mail nelfc@hotmail.com"

CANBERRA ROCK SWAP 2014

The **Canberra Rock Swop**, organized by the **Canberra Lapidary Club** is being held again this year as usual on the camping ground at Wagtail Way in the EPIC park alongside Northbourne Avenue in Canberra over Saturday and Sunday the 5th and 6th of April from 8.30 am to 5.00pm each day. Some of the attendees would probably start arriving and setting up on Friday the 4th when the camping area will be already open. Entrance is FREE for the public whereas campers and vendors are asked to register.

The Rock Swop is entirely a tail-gating swap n' sale event presenting a substantial opportunity for social interaction and is normally attended by several dozen vehicular groups and campers and many day visitors. There will be fossickers and dealers, sales of minerals, crystals, rough and cut gemstones, opals, fossils, jewellery, polished and fashioned ornaments, books and equipment.

Information on www.canberralapidary.org.au, e-mail canberralapidary@gmail.com or telephone 02 6281 3312.

GEMBOREE 2014

Australia's 50th NATIONAL GEM, LAPIDARY, JEWELLERY AND MINERAL SHOW.

GEMBOREE 2014 is to be held in Gatton, Queensland, over Easter, the 18th to 21st April 2014. Presented by the Australian Federation of Lapidary & Allied Crafts Associations Inc. (AFLACA).

Lismore Gemfest, Lismore, Northern NSW

Over Saturday 17th and Sunday the 18th of May 2014
At the Lismore Showgrounds. For information telephone 02 6688 8280

The Blaxland Gem & Mineral Club Gem Show

August 16th and 17th 2014

Displays of lapidary work and gem, mineral and crystal sales.

Refreshments available.

Glenbrook Community Hall, Great Western Highway, Glenbrook, NSW
(Next to Glenbrook Theatre) Just west of Information Centre.

<http://www.freewebs.com/blaxlandgemmineralclub/BGMCshow.htm>

8 am to 4 pm Daily Entry: Adults: \$3 Children \$1
