



THE MINERALOGICAL SOCIETY OF NEW SOUTH WALES INC

Website: www.minsocnsw.org.au

Please address all correspondence to :-
The Secretary, 58 Amazon Road, Seven Hills, NSW 2147

NEWSLETTER MAY 2019

The May Meeting will be held on Friday the 3rd of May at 7.30 pm in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville.

Society Annual Auction

The program at the May Meeting will comprise the Annual **Member's Auction**.

There may be a few announcements made at the commencement of the Meeting but otherwise the entire evening will be devoted to the Auction. The Meeting will start at the normal time of 7.30pm so members bringing in specimens for sale are recommended to arrive by 7.00pm to set out their specimens. After any announcements the Auction will commence immediately. A list of 76 specimens will accompany this Newsletter and the Auction may last to between 9.00 and 9.30pm. There will probably be a fifteen-minute break about half-way through the auction.

Members please note that transactions must be conducted entirely between the vendor and purchaser. The Society takes no commission on the sales and will not enter into any transaction arrangements. During the Auction if any vendor feels that bidding on any of their specimens is not proceeding high enough they can bid for the specimen themselves to take it back.

In addition a number of trays of minerals may be sold by silent auction. Members can bring in a tray to leave for display on a table accompanied by a bid form which will be provided. Please label your specimens, trays or boxes clearly. There will be no need to notify the Society in advance about trays being brought in for sale as they will not be listed.

FORTHCOMING MEETINGS AND PROGRAMS

June 14th (Second Friday): The program for the June Meeting may include a lecture : -
Collecting in Russia.

July 5th : There will be a lecture given by David Colchester : - '**Homemade Minerals**'.
There will also be a report to be given by Paul Meszaros : -
'The NSW Economic Rock and Mineral Collection – Latest Developments'.

August 2nd : A.G.M. The Mayne/Walker Memorial lecture will be given by Peter Williams and Jim Sharpe:- **Secondary Copper minerals of the Mt Isa District.**

September 6th : There will be a lecture to be given by Lee Spencer: - '**Arsenates: (Examples from the Ojeula Mine, Mexico)**'

October 11th: (Second Friday) The program will include a lecture, **Mineral Museums in Australia and Overseas** by Dieter Mylius and Graham Ogle.

November 1st: Program not yet finalised.

December 6th: **Christmas Social and Swap N' Sell**

The SOCIETY COMMITTEE

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THE MARCH MEETING

For the previous ten years the Society has been holding sales at the February Meetings of specimens donated by members with the proceeds of the sales given to the **Kids with Cancer Foundation, Westmead**. The sales have been organised by Jim Sharpe and in some years the total sum raised has exceeded \$2,000. The Foundation has always sent an acknowledgment to the Society but this year has also sent a **Certificate of Appreciation** which was displayed to the Meeting by the Society President, Dieter Mylius. Picture following.



Ed Zbik announced that he had two **SWMS Certificates** to award to members, Neil Baker and Marian Ong. Simon Tanner had been awarded a Certificate at the February Meeting. Ed then provided a description of the projected **Field Trip** to the **Manuka mine** to be held over the 20th to 30th of June.

With the aid of a number of images taken during the visit to the **Manuka mine** last year Ed Zbik described what the visitors this year would be finding, what equipment they would need and what arrangements they should make. He was still in the process of making final arrangements with the mine management and one problem which had arisen was that twenty-four people had already registered for the trip. This might mean that the visitors would need to be split into two groups to enter the mine property on different days.

The intended **Field Trip itinerary** comprised reaching Nyngan to stay overnight and then spend 2-3 days touring and visiting sites in the Cobar area before moving to Manuka to spend two days there. The party would then move to the Condoblin area for another two days before heading back to Sydney. Since the Field Trip party would be dealing with mining companies the members of the party must be financial members of the Society and hold Society SWMS Certificates. There would probably be a brief induction on site and Ed hoped that two of the mines might take small groups underground.

Ed further described the equipment which members would need including heavy-duty clothing, long-sleeved shirts, long reflective-striped trousers, hard hats, safety glasses, high-visibility striped vests, gloves and steel toe-capped work boots, etc, and also recommended that if anyone had a CB radio they should bring it along. He further warned that even in June the mine site would be hot, especially when members would be below the surrounding ground level when the bottom of the Manuka pit could be at least ten to fifteen degrees warmer than the surface. The site was about one kilometer long by about a half kilometer wide and the pit walls were of white rock which would reflect sunlight into the pit area.

Dieter Mylius reminded members about the regular monthly **Micro-Mineral Group** meetings, the next one of which would be held a week on the following Saturday at Brian England's house in Maitland to study minerals of sedimentary rocks. In view of the distance involved in attending some of the Group meeting which are also occasionally held in Dapto, it was suggested that members should inquire about car-pooling which it might be possible to arrange.

Dieter Mylius presented the first talk for the evening with the aid of a series of Power Point images and substantial notes which he had prepared and which are summarized following.

Kyloe Copper mine near Adaminaby

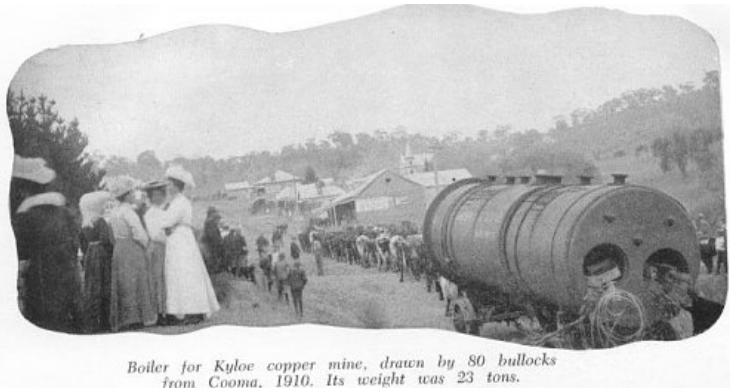
Dieter Mylius

The Kyloe Copper Mine was a small mine near the old township of Adaminaby. When the dam creating Lake Eucumbene was built in 1957 the town had to be re-located to higher ground about seven klm to the north-east. The mine was about two kilometers from the old town but after the dam was built the mine site is now on the other side of the lake from the old township and both are usually partially submerged. To reach the mine site from the new township would involve a 60 klm drive around the lake which is said to be able to hold, when full, about nine times the volume of water compared to Sydney Harbour. In 2007 Lake Eucumbene dropped to just 9.4% of capacity (the lowest it had been since it was filled). As the water fell, many of the building foundations from the old town and parts of the mine site and buildings resurfaced for a time.

Adaminaby is situated in high country on the Snowy Mountains Highway to the south of the ACT and about 50klm to the northwest of Cooma. It is one of the highest towns in Australia at an elevation of over 1000 meters. The area experiences heavy snowfalls in winter when it is a snow sports destination. In spring it is a trout-fishing centre and is known as the 'Home of The Big Trout' (with an image of the Big Trout displayed),

and the location of the Snowy Mountain Scheme Museum. In 1957 when it had to be moved Adaminaby had a population of about 800 people, compared to 300 by the 2016 census.

Copper was discovered at Kyloe in the 1860s but mining did not commence until 1901 with miners Litchfield & Hassal extracting 27 tons of copper ore. Mining activity increased with the formation of the Kyloe Mining Company in 1907 which improved the site, extended shafts, and built furnaces and facilities to enable processing. Over the next few years since the ore was quite rich with average grades of 18% the company did not need to borrow money and paid for the operations directly from the income. In 1910 a large 23 ton boiler was brought by rail from Sydney to Cooma and then moved by a team of 80 bullocks to the mine taking six weeks to cover the last 50km.



Boiler for Kyloe copper mine, drawn by 80 bullocks from Cooma, 1910. Its weight was 23 tons.

Boiler leaving Cooma, 1910



Boiler in Commissioner St, Kyloe, 1910

Employment grew to 195 including workers carting the ore to Cooma and cutting timber for furnaces which led to Adaminaby becoming a thriving centre. However by April 1913 payable ore was worked out and in 1914 mining at Kyloe Copper mine was abandoned and the company transferred its operations to a mine at Tenterfield which they also called Kyloe. Over the period of operation at Adaminaby the mine had produced 66,147t of copper ore, for 3674t of copper equivalent to \$3,465,000 in 1974 dollars.

In the Official Year Book of the Commonwealth of Australia No 5, in 1912, is the statement: *'The Kyloe mine in the Cooma division, contributed materially to the increased output (of copper in NSW), the production from this mine being valued at £83,372 (in 1910), as against £29,996 in 1909.'* Over the period *'all of NSW produced £486,527 of copper, with Cobar alone producing £282,348.'*



The mine site exposed by low water level.



Kyloe mine mill ruins below the high water mark, C 2003. Denis F photo

The main lode of copper mineralization at Kyloe is a felsite dyke which passes from sediments to aplitic and biotite granite along a shear that follows the contact. The deposit is zoned vertically with an oxidation zone

of copper carbonates, cuprite and bornite and a supergene zone with chalcocite and chalcopyrite. The mine main shaft eventually extended to 213 meters by the end of mining. There are a few other mines in the area but mineralization in the Snowy Mountains area is limited and sparse and based on the amount of ore produced Kyloe was the largest.

Whilst the most of the area of the Kyloe mine site is usually under water Dieter Mylius was able to make two visits to the site in 2004 and 2007 when the reservoir level was very low and most of the mine site exposed. The main minerals at Kyloe were chalcopyrite, bornite, pyrite and chalcocite. Other minerals listed for the site were malachite, cuprite, chrysocolla, native copper, quartz and calcite and pieces of some of these could still be found on the remains of the dumps and the fairly extensive slag pile. Pieces of chalcopyrite recovered by the speaker were still quite bright and a piece of what he had taken to be malachite had turned out to be pseudomalachite. He had also established that brochantite occurs at the site.

In concluding his talk Dieter Mylius suggested that the site was historically important, it had been a major mine for a time in an interesting locality and could be worth a visit if the dam water level was low. He finally introduced the next speaker for the evening.

Melissa Murray is an Education Officer at the Australian Museum. She has a BSc in Geology and is currently working for her Master's degree at UNSW under the supervision of Ian Graham. For her lecture to the Society Melissa referred to a Power Point montage that she had prepared to explain the interest people have in minerals and particularly to describe the Albert Chapman Collection's superlative minerals and its current move to Bathurst. The following summary of her lecture refers to and quotes substantially from her presentation.

Magnificent Minerals in Museum collections: The Albert Chapman Collection

Melissa Murray

Melissa Murray initially explained that she had set herself the task of examining why minerals are so attractive and interesting to people. To this end she had assembled a Power Point presentation particularly featuring the Albert Chapman Collection minerals. This had led her to also describing the temporary move of the Collection to the Australian Fossil and Mineral Museum at Bathurst where it may be displayed for about two years before returning to the Australian Museum. A video section of her pictorial presentation showed parts of the Collection being very carefully moved by a number of workers from the display cases to tables to be wrapped and packed for transport. The video showing this being done was very considerably speeded up by about eleven thousand times since the actual length of time of the afternoon's work would have lasted some hours. Several Society members were to be seen helping with the packing up including Ross Pogson who is Collections Manager at the Museum but also Dieter Mylius, Joan Henley, David Colchester and Dayna McGeeney.

Firstly Melissa Murray asked what defines a mineral specimen as being of museum quality and what are the criteria that make individual mineral specimens outclass others and become world famous? She then proceeded to answer the questions.

'There are several methods used but there is no accepted international standard for measuring the quality of minerals. This is because the criteria for rating a mineral specimen's level of magnificence must take account of both qualitative and quantitative characteristics. All of the following words could be used in descriptions:- Extremely beautiful or impressive. Splendid, spectacular, striking, glorious, superb, majestic, awesome, awe-inspiring, breathtaking, sumptuous, resplendent, grand, impressive, imposing, monumental, opulent, fine, luxurious, lavish, brilliant, radiant, dazzling, beautiful, elegant, gorgeous, transcendent, etc etc.'

MINERAL RATING CRITERIA

Qualitative: Visual impact; colour; lustre; composition; rarity; size; aesthetics.

Quantitative: Crystal size; condition; matrix; provenance; rarity; association; world ranking.

Objective or quantitative criteria are assessable, quantifiable, measurable properties.

Subjective or qualitative criteria are biased towards a personal or individual prejudiced perspective.

Thompson, (2007) devised a three- tier system of classification; Icon, classic and contemporary masterpiece.

CONCLUSION

What are the most important criteria for rating a mineral specimens' magnificence? Until a standard is developed and agreed upon, it may depend on who is asked, their level of mineral knowledge, rarities or unusual formation conditions and historical locations or collections. Results from this small study indicate a model for rating the magnificence of a mineral using a method based on criteria explored and tested could be of use and warrants further research with various interested groups. Perfect crystals or pretty colours, social vs science and individual preference vs expert knowledge; all play a significant role in determining what specimens are preferred.'

Having posed the questions about assessing all the criteria to express the magnificence of minerals Melissa Murray then proceeded to introduce the Albert Chapman Collection and display a number of images of the superlative specimens and the display of them at the Australian Museum.

Albert Chapman, (1912 – 1996) was a life-long collector of minerals and notably only collected the very best. He assisted Australian museums in acquiring important specimens and was the first Australian mineral collector to visit the famous Tucson Gem and Mineral Show in the USA. He was also a founding member of the Mineralogical Society of New South Wales in 1975. Some years before he passed away in 1996 Albert sold the greater part of his collection to the Earth Exchange and after the closure of that museum it was moved to the Australian Museum. From the speaker's presentation :-

THE ALBERT CHAPMAN COLLECTION

'The Albert Chapman collection is a feast for the eyes with diverse, breathtaking colours and shapes, fine features and unique characteristics of magnificent minerals. The collection consists of 820 mineral specimens, hand-size or smaller and is world renowned (top 10) for its mineralogical diversity, crystal perfection, aesthetic appeal and high Australian content. An extraordinary sub-collection of fine Broken Hill minerals includes many great rarities. This makes it a perfect collection to examine for magnificent specimens.'

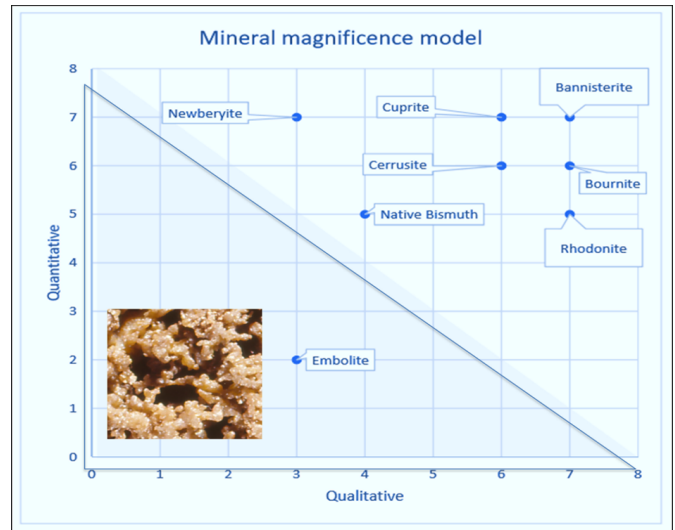


The display at the Australian Museum.

To illustrate her points about the magnificence of minerals and the various criteria to assess the qualities and features the speaker displayed a series of images of specimens from the Albert Chapman collection pointing out the more notable features as she proceeded and also referring to her 'Mineral Magnificence model' which would provide ratings for the various specimens.

'In order to determine how a mineral specimen compares to rivals, comparisons with other known museum collections was made. Using a combination of criteria used by Thompson (2007), Halpern (2005), Currier (2008) and Bancroft (1978) along with judgement from experts, (I. Graham, R. Pogson, A. Chapman) I have rated a small sample of Chapman's specimens.

If the specimen possessed a desired feature from either a qualitative or quantifiable characteristic, it rated 1 point. The magnificence rating will be visible on a cumulative scale. In order to rate highly the specimen should be above the magnificence line (shaded area).'



PACKING UP AND MOVING THE ALBERT CHAPMAN COLLECTION

By reference to the video of the work dismantling and packing up the Collection the speaker described the great care being taken with the specimens which were carefully removed from the display tables, moved to other tables to be wrapped up and packed into special boxes made to order by an outside contractor to be loaded into other boxes and eventually onto special air-suspension trucks for transport to Bathurst. Even with a number of workers assisting, dismantling just one of the big cases and wrapping up the specimens took two and a half weeks work. A few specimens could not be moved due to their fragility, toxicity or radioactivity. It was expected that the Collection would have been installed and on display at Bathurst by next June/July.

Melissa Murray finally expressed thanks to the people who had helped with the preparation of the presentation :-

'The Australian Museum Geoscience staff and volunteers for assistance with resources for this presentation. Branka Spehar currently works at the School of Psychology, UNSW Sydney. Branka does research in visual perception, attention and multisensory aesthetics. Robert Coenraads for encouragement and proof reading. All images and video used courtesy of and Copyright Australian Museum.'

After the conclusion of her lecture Melissa Murray dealt with a large number of questions and advised that she was available to answer more and be offered suggestions about assessing mineral quality. Her e-mail address was provided :- melissa.murray@student.unsw.edu.au

FORTHCOMING EVENTS

The Lismore Gem & Lapidary Club will be holding the 29th LISMORE GEMFEST

The 29th Lismore Gemfest will be held in the Lismore Showgrounds, Alexandra Parade, North Lismore, over the weekend of the 18th and 19th of May next. Saturday from 9am to 5pm and Sunday from 9am to 3pm.

Quoted from the Lismore Gem Club website : -

'Lismore GEMFEST is the biggest annual event in the country devoted to lapidary and allied arts and is organised by the Lismore Gem & Lapidary Club Inc. Exhibitors come from all parts of the country and range from amateurs to the most experienced professionals. Everything from rough stone for cutting, through to finished jewellery in all price ranges, along with mineral specimens, fossils, gold nuggets and meteorites are to be found on display. There are gem sieving activities for children, demonstrations of jewellery making and other craft activities.

A range of food outlets are available, along with free parking in the Lismore Showground. Visitors from outside of the local area can enjoy special deals for camping on site. There is something for all ages and tastes at this event. Come once and we are sure you will become a regular.'

Further information from : - bruce.copper@bigpond.com, Telephone 02 6688 8280, Or from the Website : - www.gemclublismore.org.au

The Bankstown Gem and Mineral Expo

By the Australian Gem & Mineral Expos

The Bankstown Expo is being held over Saturday and Sunday the 1st & 2nd of June 2019
in the Arena Sports Club, 140 Rookwood Road, Yagoona.

The Expo is supported by The Bankstown and Districts Lapidary Club. www.bankstownlapidary.com

'Items For Sale Will Include Jewellery, Gemstones, Beads, Opals, Carvings, Gem Rough Fossils, Meteorites, Metaphysical and Healing Crystals and Mineral Specimens from all over the World.

Entry: Adults \$7, kids with parent/s enter free. Opening hours are 9:30 till 5:00 on Saturday and 9:30 till 4:00 on Sunday. There will be a lucky door prize, drawn on Sunday afternoon. Meals and refreshments are available. Plenty of parking in the Arena Sports club carpark.'

For more information: www.agamexpos.com.au; raregems@optusnet.com.au or 0412 333 150.

Windsor Gem and Mineral Fair

Over Saturday and Sunday the 15th & 16th of June at the Windsor Function Centre
on the corner of George Street and Dight Street Windsor.
Hosted by the Hawkesbury Valley Lapidary Club and Kristallen.

'The show will have a number of traders from around Australia displaying their wares as well as displays and demonstrations by the Hawkesbury Valley Lapidary Club.

Items for sale by the many traders there will include Jewellery, gemstones, beads, opals, carvings, gem rough, lapidary cutting rough, fossils, meteorites, metaphysical and healing crystals, and mineral specimens from all over the world. A great day out for the whole family.

Entry: Adults \$7, kids with parent/s are free! Opening hours are 9:30 till 5:00 on Saturday and 9:30 till 4:00 on Sunday. There is also a great lucky door prize for one lucky person who comes!'

For more information please contact Peter at raregems@optusnet.com.au or 0412 333 150

The Blaxland Gem & Mineral Club Gem Show

Saturday and Sunday August 17th and 18th 2019
 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.

THE JOINT MINERALOGICAL SOCIETIES OF AUSTRALASIA 42nd ANNUAL SEMINAR

The 42nd Joint Seminar of the Mineralogical Societies of Australasia will be held in the State Library of WA in Perth over Saturday and Sunday the 31st of August and 1st of September 2019 on the theme : -

Traps in mineralogy – pseudomorphs, look-alikes, fakes and synthetics

The full Seminar program includes a Micromount session to be held at the WA Lapidary Club, Rivervale, a Swap and Sell on Monday 2 September also at the WA Lapidary Club, Rivervale (\$5.00 per table for sellers), and a field trip to the Murchison Region on Tuesday the 3rd of September.

Registration fees are \$135.00 for MinSoc or like-Society Members, \$170.00 for non-members and \$75.00 for students.

The Conference dinner, (\$65), and Mineral Auction will be held on Saturday evening at the Mercure Hotel, Perth CBD.

Inquiries for information, registration and bookings may be made to : -

Lee Hassan

Honorary Secretary/Treasurer

The Mineralogical Society of Western Australia Inc.

lee_notebook@msn.com

<http://www.minsocwa.org.au>

GEMKHANA 2019

The Annual Gem & Mineral Show and Competition of lapidaries from all over NSW will be presented by the Gem and Lapidary Council of NSW Inc, at the Hawkesbury District Agricultural Showground, 40 Racecourse Road at Clarendon outside Richmond over the weekend of the 28th and 29th of September. From 9am to 5pm each day.

Visitors please note: These dates are the weekend before the October long weekend of the 5th to 7th October.

For further details email gemkhana@gemlapidarycouncilnsw.org.au
