



THE  
**MINERALOGICAL SOCIETY**  
OF  
**NEW SOUTH WALES INC**

C/o School of Natural Science  
B.C.R.I. Parramatta Campus University of Western Sydney  
Locked Bag 1797 Penrith South DC N.S.W. 1797  
Website: [www.minsocnsw.org.au](http://www.minsocnsw.org.au)

**NEWSLETTER**

**MAY 2015**

**The May Meeting will be held on Friday the 1<sup>st</sup> of May 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.**

**Member's Mini-Auction.**

The annual Member's Mini-Auction will be held at the May Meeting. There may be a few announcements made at the commencement of the Meeting but otherwise the entire evening will be devoted to the Auction. This year there are some ninety-three specimens for sale and vendors are recommended to arrive by 7.00 p.m. in order to lay out their lots for display and examination by prospective bidders who should also try and arrive early. The Meeting will start at 7.30 p.m. sharp and after any announcements the auction will commence immediately and will probably last over two hours.

In addition to the regular auction minerals can also be sold by silent auction. Members can bring in a tray of specimens to leave on a table accompanied by a bid form which will be provided. Trays may be brought in on the auction evening without notice having been given in advance.

**Please clearly label all specimens and boxes.**

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**FORTHCOMING MEETINGS**

June 12<sup>th</sup>. Lecture by David Vince on : - **Mineral Collecting in China in 2000 and Now.**  
(Second Friday, after the long weekend):

July 3rd : Lecture by David Colchester and John Chapman on : -  
**'Mudgeeite. Establishing a New Mineral.'**

In order to illustrate and display at the lecture members are invited to bring in any specimens they may have from the Mt Knowles site near Mudgee where examples of the new mineral have been found.

- August 7th: Society **A.G.M.** and the Betty Mayne and Edna Walker Memorial Lecture to be given by Noel Kennon on : - **‘The History of Broken Hill’.**
- September 4th: Lecture on **‘The Creative Power of Groundwater’**, by Peter Williams.
- October 9th : **‘The Wonderful World of Micro-Minerals’.** Presented by the Micro-Group.  
(Second Friday)
- November 6th : **‘Aspects of the Block 14 Mine’** by John Rankin.
- December 4th : **Christmas Social**

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## INVITATION

Society member John Hoffman in Lismore has sent the following invitation to the Society and to any members who would be travelling to Lismore for the 2015 Gemfest over the 16th & 17th of May.

‘Please let all your members know that I am having my 60<sup>th</sup> birthday celebration on the Saturday night of the Lismore GEMFEST ie. 16<sup>th</sup> May, at the Rous Hotel, Keen St and Zodiac St, Lismore 7 pm to 9 pm. All MINSOCNSW members coming to Lismore are invited to attend. Various hot function platters will be provided including pastries, vegetarian, pizza, seafood and chicken. Buy your own drinks, tea, coffee etc available. I hope those that know me can attend to mark my coming of age and to help celebrate GEMFEST’S 25<sup>th</sup> anniversary. Please note that I have been a member of your Society since September 1983 and served as Vice President and Committee member for a number of years when living in Sydney. GEMFEST is currently considered the best and largest Mineral, Gem and Crystal show of its type in Australia with over 200 traders, tailgaters etc. I will have a display of some of my collection again at this year’s event.

kindest Regards, John Hoffman  
April 2015

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## The SOCIETY COMMITTEE

PRESIDENT:	Dieter Mylius	Tel: (02) 9477 1060
VICE-PRESIDENT:	Jim Sharpe	Tel: (02) 9871 2502
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SECRETARY:	George Laking	Tel: (02) 9636 7145
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TREASURER:	Graham Ogle	Tel: (02) 9868 4446
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	David Colchester	Tel: (02) 9449 3862
	John Rankin	Tel: (02) 9482 7474
	Edward Zbik	Tel: (02) 9638 6586
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## 40<sup>TH</sup> ANNIVERSARY OF THE MINERALOGICAL SOCIETY

This year marks the 40<sup>th</sup> anniversary of the formation of the **Mineralogical Society of N.S.W.** which was formally inaugurated at a meeting at the house of Mr Robert Bliss on the 12<sup>th</sup> of May 1975.

In view of this significant year the Society Committee has discussed holding a formal commemorative dinner possibly within a week or two after the Annual General Meeting in August but would welcome suggestions from members.

### **The History:**

Society archives record that for the first few months after the 12<sup>th</sup> of May 1975 several General Meetings interspersed with committee meetings were held in various members' houses. The first organisational and committee members included Robert Bliss, Albert and Doreen Chapman, Laurie Lawrence, Richard De Pledge, Bert Gardner, Chris Parkinson, Simon Pecover, Arthur Roffey and Gary Sutherland. Within a few months a number of other people had become active in the Society organisation including Betty and Jim Clark, Erica Hepburn, Maxwell Hudson, Stephen Wright, Neville Irvine, John Woolfe, patrons Lin Sutherland and Oliver Chalmers and country representatives Kevin Davy and Warren Somerville.

**Apologies for omitting any names of the earliest members.** In addition to the organisers a number of other people had become members of the Society within the first few months and whilst Society membership has waxed and waned over the years it has never been less than fifty and since the mid-1990s has been always over one hundred. Some of the people who became members within the first year have retained their memberships and are still with the Society today.

The records of the first meetings indicate the preparations and deliberations for operating the Society including compiling and presenting for acceptance a constitution and code of ethics. There were also arrangements made to hold meetings in a venue that could accommodate a large number of people with the Gemmological Association being approached and agreeing to allow these to be held in Gemmology House, Wentworth Street, central Sydney.

The Mineralogical News Society Newsletter No 1 dated August 1975 advised that an 'inaugural' General Meeting of the Society would be held in Gemmology House on Friday the 3<sup>rd</sup> of October 1975, postponed from a date originally scheduled for September. The November 1975 Newsletter summary of that first meeting refers to approximately 45 people attending to hear a lecture given by Albert Chapman on Classic Minerals And Locations, Past And Present. There was also a film shown on 'Crystals'.

The Mineralogical News Society Newsletter after commencing publication in August 1975 was produced monthly for eleven months of each year up to the early 1980s when it became a quarterly but with a News-sheet produced in the months when there was not a magazine. Either a Newsletter or News-Sheet has always been produced and distributed to members for eleven months of each year since 1975.

The practice of holding meetings on the first Friday of each month of the year excluding January, or the second Friday after a long weekend, was established from the first meeting on October 3<sup>rd</sup> 1975 and has been maintained ever since. Meetings were held at Gemmology House from 1975 to 1977 and then at the Australian Museum to 1988. Meetings were then held at the Mining Museum, renamed the Earth Exchange, at the upper end of George Street almost under the Harbour Bridge, until 1996.

The Society applied to become an incorporated body in 1990 which involved re-writing the Society Constitution to conform to Department of Consumer Affairs recommendations and adding

'Incorporated' to the Society's name. Whilst re-writing the Constitution made a number of changes the original text referring to the Society's Objectives and Code of Ethics was retained in full.

Upon the closure of the Earth Exchange in 1996, Peter Williams arranged for the Society meetings to be held on U.W.S. premises, first at the 'Coach House' in Westmead and then at the current venue in the Parramatta campus of the University.

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## WELCOME

Welcome to new members Ethan Cooke of Dooralong and Melissa Murphy of Haberfield

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## THE APRIL MEETING

At the commencement of the Meeting Jim Sharpe announced that Peter Williams had gone into the North Shore Private hospital on Wednesday for what was expected to be minor vascular surgery on his legs. Then just today with him experiencing chest pains and being given further examination a decision was taken to perform a cardiac bypass operation immediately. The operation had been conducted that afternoon and Jim Sharpe had been advised that by this evening 'the patient' was currently in the Intensive Care Unit at the hospital and stable. The President expressed the expectation that members would wish Peter Williams all the best for a full recovery.

[ N:B. Peter Williams was kept in hospital for only five days after the operation and then allowed home. Jim Sharpe reports that after a subsequent checkup a cardiologist has pronounced that 'the patient' is progressing quite satisfactorily.]

Ed Zbik described the two recent Field Trips which he had organised for Society members, to the **Cordillera Mine** at **Tuena** on 21<sup>st</sup> March and to the **Prospect Quarry** on 7<sup>th</sup> April. Most of the original dumps at Cordillera from which stolzite had been found in the past had been taken away but the party found another area from which they recovered a variety of specimens.

The visit to **Prospect quarry** had involved a great deal of preliminary organising by Ed to ensure that a visiting party would be able to conform to substantial regulations being imposed by the Boral Company site managers. The trip had probably been the last visit that any collectors might make to the old Prospect quarry since the entire area has been extensively leveled and rehabilitated, work which was almost completed. In the event the party was not allowed to take in any equipment at all including hammers and only collect whatever they could pick up directly off the ground. This had led to a certain amount of country rock being collected which was still awaiting cleaning to ascertain whether any significant minerals were present. The party was threatened with rain and during one shower when they took shelter Brian England gave the members a detailed talk about the geology of the site.

The next field trip would be during May to **Cow Flat**, about twenty kilometers south of Bathurst. The date would be towards the end of the month but was still to be decided pending final arrangements with the Cow Flat site geologist with whom Ed Zbik had been in contact. Ed would e-mail members about the details when these were finalised.

## ‘Sampleite, An Undervalued Mineral’

**Jim Sharpe**

Jim Sharpe had wanted to give a talk on sampleite because he considered that the mineral should be regarded as substantially significant given that it is quite rare. In his opinion the samples from the Northparkes mine in central New South Wales have been the best from anywhere in the World and he wanted to stress the importance to collectors to obtain good specimens, also considering that the source has by now become depleted. To his knowledge there was no more sampleite-bearing ore being mined at Northparkes and after a number of collecting trips have been made to the mine by Society members and other mineralogical groups the dumps which contained the sampleite have been very well scoured.

The speaker referred to the history of the mineral which was first found in the Chuquicamata mine in north Chile in 1921. It was named after Mat Sample a mine superintendent of the Chile Exploration Company at the time. At first it was found in insufficient quantities to be properly analysed and described until more was found in 1938-1939 and samples were sent to Harvard University which published results in 1942. It was shown to be a complex copper chloro-phosphate, composition  $\text{NaCaCu}_5(\text{PO}_4)_4\text{Cl}\cdot 5\text{H}_2\text{O}$ . Only very small amounts had been found anywhere else in the World before the Northparkes mine opened up their E26 orebody in the early 1990s. Apart from the Chuquicamata mine, small amounts of sampleite have been found at a few other copper mines in Chile and also small amounts in Austria, Namibia, South Africa and the Lake Boga granite quarry in Victoria, (also by now very well scoured), which contained a large variety of minerals, including a number of phosphates.

There have also been reports of extremely small amounts of sampleite being found at Broken Hill, at Spring Creek in S.A. and from a cave in W.A. Cave findings would not be too unexpected since as long as there was a source of copper in the country rock, the cave would probably also have phosphate from bat guano. After sampleite was found at Northparkes, Jim Sharpe sent two specimens to Carl A. Francis, curator of the mineral collection at Harvard University, who sent back two specimens from the original parcel of Chilean specimens sent to the University in the late 1930s. This seemed to indicate that the University must have been provided with a substantial quantity at that time.

The Northparkes mine management has been very helpful to fossicking groups readily allowing and supervising visits by groups wishing to collect on the dumps. The parent company Rio Tinto has even published an article in the company magazine about the interest in sampleite at Northparkes and its policy of allowing fossicking. A copy of the magazine with the fossicking article was shown, Jim Sharpe noting that there were some four pages devoted to the article which also included a number of photographs showing the collecting activities. Some Society members were to be recognized among the collectors including Adam and Meaghan McKinnon and the speaker himself.

The orebodies at Northparkes comprise three columns of copper-bearing ore down to about 1,000 meters and each about 200 meters wide. The bodies designated by the mine E22 and E27 are about four kilometers from E26 and whilst the former two also contain a number of secondary copper minerals there is not a trace of any sampleite. Jim Sharpe has advised in previous lectures that the development of sampleite in E26 only would clearly be due to the salinity in the ground water around that orebody being about ten times higher than at the others and contributing chloride ions to the mineralogy. He also reminded members that an article on ‘*The mineralogy of the oxidized zone of the E26 orebody at Northparkes N.S.W.*’ had been published in the A.J.M., Volume 10, Number 2, December 2004.

In conclusion Jim Sharpe advised that as far as he was aware there was definitely no more sampleite to be obtained from Northparkes and that the value of specimens recovered thus far could only increase in value.

In this regard Geoff Parsons reported that he had seen a small specimen of sampleite in a shop in Vienna, Austria, with a price of 120 Euros, (about AU\$165).

After the talk John Chapman showed three images of sampleite specimens in the Australian Museum collection. Notably the specimens included one with both sampleite and libethinite, another copper phosphate mineral, present on the one piece. The specimens were mostly quite small and the photographs had been taken by means of a digital micro-photographic and multiple-imaging stacking process. This method brings the entire depth of specimens into clear focus in one combined image.

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## **‘Applications of Mineralogy in Forensic Science’**

**Jeff Davis**

Jeff Davis introduced his lecture by showing a few images of mis-spelt texts and novelty diagrams which indicated how an observer’s eyes could be deceived by what they presumed they should be seeing as compared to what was actually present. In defining Forensic Geology the speaker explained that this is concerned with the application of geological information and techniques, particularly in regard to such information being presented to a court of law. He stressed that in Forensic Science it was important for the investigator to commence an examination with a clear mind and not be influenced by what they may have expected to find. The lecture was very thorough and substantially illustrated by a large number of charts and lists indicating the categories of aspects of forensic geology and mineralogy, the history of the science and introducing names of the founding and later workers in the field. An overview was also provided of the general aspects of crime scene investigation.

A German forensic scientist, George Popp, (1867 – 1928), has been said to be the first investigator to use geological evidence in 1904 to solve a crime when he associated particles of hornblende found on the scarf of a murder victim with the same mineral under the fingernails of a suspect. The newspapers of the day lauded the phrase ‘*The Microscope as a Detective*’. Another worker named Edmund Locard (1877 – 1966), was said to be really the pioneer of Forensic Science. His contributions to the work were stated to have been invaluable such as the establishment of a technique named Poreoscopy which is the study of pores that appear in fingerprint ridges thereby making him the father of fingerprinting. A ‘mantra’ of the forensic scientist is that if any two objects come into contact there is always a transfer of material which can probably be identified. An action by an individual cannot occur without leaving a trace and the more violent the action, the more likely the trace and a silent witness to a crime.

Another scientist, Walter McCrone, (1916 – 2002), is also said to be the father of modern forensic microscopy and has revolutionized the use of the microscope in forensic science. Amongst his work he has looked at the Shroud of Turin examining pollen and paint particles to help establish its age and has examined the remains of Napoleon examining hair samples, Napoleon having been suspected to have been poisoned. Other work has involved identifying modern titanium oxide paint on ancient manuscripts showing that they were fakes.

Jeff Davis referred to a prominent American forensic scientist, Skip Palenik, whom he had met at the McCrone Research Institute in Chicago in 2000 to be shown some techniques in using chemical microscopy. Skip Palenik is well-known in America for providing trace evidence analysis and forensic microscopy for many high-profile criminal cases. His special interest has been the identification of small single-grain particles in soil samples and he has written many articles on aspects of forensic science.

Referring to crime scene investigation the speaker suggested that many members would be familiar with television crime shows, Poirot, Inspector Morse, Sherlock Holmes, etc etc, and suggested that they all had one feature in common, ... in all cases the crime had to be solved within the one hour that the show episode would run !

Jeff Davis then described in general all the various components of crime scene investigations of which forensic examination would be only one part and then moved on to concentrate on the forensic aspect. An essential piece of equipment for the forensic investigator would be a good microscope, either a standard stereo instrument or an advanced petrological microscope with a lot of features including preferably some form of camera attachment. A scanning electron microscope would also be very useful. Then there is a large range of other instruments with which the forensic laboratory could be equipped. These would be x-ray diffractometers, micro-probe instruments, proton and neutron probes, equipment for isotopic analysis and for laser-ablation with ICP, (Inductively Coupled Plasma Mass Spectrometry) which like chemical analysis would be destructive of the sample. These would all allow very close examination and identification of grains in any suspect material

Obviously in forensic examination of samples a large if not majority amount of anthropogenic (man-made), material may be present as well as any amount of biological material, plant and animal debris etc and the speaker described a little of this type of material which will occur.

Jeff Davis also spent a little time describing work he had performed some years ago examining the content of ceiling dust in samples taken from roof cavities of a number of houses around Sydney. Notably in samples from houses in the Ultimo area he found a quantity of black material which he was able to identify as soot from the Ultimo power station, long closed down and now the site of the Power House Museum. The heavy dust storm experienced by Sydney some years ago had contributed a proportion of iron oxide particles to house dust and the speaker had regularly found in dust samples varying proportions of lead halide particles from the lead-based petrol being used in cars.

The speaker finally described the forensic work in which he had been personally involved on two specific criminal investigations. The investigations had looked at gun-shot residue among an amount of other particulate material in samples including cartridge cases recovered from the crime scenes and the precautions taken to obtain legally reliable and uncontaminated findings were described in some detail. This brought Jeff Davis to the end of his very thorough description of the mineralogical aspects of forensic science after which he answered a number of questions.

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## **FORTHCOMING EVENTS**

### **The 26th Annual LISMORE GEMFEST**

Presented by the Lismore Gem & Lapidary Club Inc over the weekend  
of the 16th & 17th of May 2015 in the Lismore Showground.

The 26<sup>th</sup> Gemfest is now in its 'Silver Jubilee' year and will be held as by now long-established in the Lismore Showground. The last Show in May 2014 saw a large number of dealers and over 130 stallholders and tailgaters who displayed and offered for sale minerals, fossils, cutting material, cut stones, jewellery findings, tools, machinery and finished jewellery.

'More than half of the trading is under cover, providing a safeguard against poor weather. There are also club displays and children's activities such as gem sieving. A variety of refreshments are available from several caterers. On-site camping registrations are obtainable at very economical rates.'

Information: Postal enquiries to P.O.Box 743, Lismore, NSW 2480,  
 General enquiries to Bruce Copper on 02 6688 8280 or e-mail : - [bcopper@bluemaxx.com](mailto:bcopper@bluemaxx.com),  
 Tailgate enquiries to Jan Thompson on telephone 02 6621 4703.  
 or visit the Website [www.gemclublismore.org.au](http://www.gemclublismore.org.au).

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## **THE WINTER GEMCRAFT & MINERAL SHOW**

by the Canberra Lapidary Club

Held over Saturday and Sunday the 30<sup>th</sup> and 31<sup>st</sup> of May 2015 from 10.00 am to 5.00pm each day  
 in the Mallee Pavilion in the EPIC park alongside Northbourne Avenue in Canberra.

Entry \$5 adults, \$10 family, \$2 children/concession.

Dealers in Minerals, fossils, jewellery, rough & cut gemstones, opals, beads,  
 lapidary equipment & supplies, displays of member's collections.

For information : - [www.canberralapidary.org.au](http://www.canberralapidary.org.au)

Email : [canberralapidary@gmail.com](mailto:canberralapidary@gmail.com) Phone: 02 6260 5322

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## **THE WINDSOR JEWELLERY, BEADING, GEM & MINERAL SHOW**

Over Saturday 9.30 a.m. to 5.00 p.m and Sunday 9.30 a.m. to 4.00 p.m the 13th & 14th of June at the  
 Windsor Function Centre on the corner of Dight & George Streets in Windsor.

SALES of jewellery, gemstones, beads, opals, mineral specimens from all over the world,  
 tools and equipment for lapidary and beading work, metaphysical and healing crystals

Admission fee \$5. Light refreshments available.

Inquiries to Peter Beckwith on 0412 333 150 or email at [raregems@optusnet.com.au](mailto:raregems@optusnet.com.au)

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## **The 2015 Atherton Tableland Mineral & Lapidary Club GEM FEST**

'Every year the Gem Fest is bigger and better and the 2015 will certainly be bigger.'

'Sunday 2nd August, 7.00am to 3.00pm - Alongside the Atherton Tablelands Mineral & Lapidary Club, Race Course Road, Tolga, on the scenic Atherton Tablelands, 1 1/4 hours drive from Cairns and 1 1/2 hours from Port Douglas. Tolga is well known for its monthly Tolga Farmers Market. The Tolga Market is on the same day and just 100m from the Gem Fest. Stallholder enquiries welcome.

For information contact Laurence Jones @ Rainforest Gems, - Aura & Laurence Jones, 26 Kennedy Highway, Tolga, QLD 4882 or PO Box 1084, Tolga. Telephone 07 4095 5223, e-mail [Jones@internode.on.net](mailto:Jones@internode.on.net) Internet [www.RainforestGems.com.au](http://www.RainforestGems.com.au) Find us on facebook'

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## **BLAXLAND GEM & MINERAL CLUB GEM SHOW**

Over Saturday and Sunday the 15<sup>th</sup> & 16<sup>th</sup> of August 2015  
 In the Glenbrook Community Hall, Great Western Highway, Glenbrook, NSW  
 (Next to Glenbrook Theatre) Just west of Information Centre.

Displays of lapidary work and gem, mineral and crystal sales. Refreshments available.  
 8 am to 4 pm Daily    Entry: Adults: \$3    Children \$1

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## **CUMBERLAND GEM & MINERAL SHOW**

Over Saturday and Sunday the 23rd and 24th of August  
 in the Roselea Community Centre, Pennant Hills Road, Carlingford.

SALES of jewellery, gemstones, beads, opals, mineral specimens from all over the world,  
 tools and equipment for lapidary and beading work, metaphysical and healing crystals.  
 Displays of mineral specimens, cut & polished stones, carvings & gemstones.

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## **WHITE CLIFFS GEMFEST AND CAR BOOT SALE**

26th & 27<sup>th</sup> September 2015  
 In the White Cliffs Community Hall from 9.00am to 5.00pm Saturday and Sunday  
 For further information contact Jane Stevenson on 0438 790 510, e-mail [wema2015@hotmail.com](mailto:wema2015@hotmail.com)

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## **The AUSTRALASIA JOINT MINERALOGICAL SEMINAR: TASMANIA 2015**

The Joint Mineralogical Societies of Australasia will be holding their annual Seminar  
 at Grindelwald, Tasmania this year between the 1<sup>st</sup> and 14<sup>th</sup> of November 2015  
 hosted by the Mineralogical Society of Tasmania Inc.

The provisional theme for the Seminar is : - **What's new in Australian Mineralogy**

The Seminar lecture program will be held over Wednesday and Thursday the 4<sup>th</sup> and 5<sup>th</sup> of  
 November at Grindelwald, a resort near to Launceston, and there is an extensive program of field trips to  
 collecting sites, visits to museums, mines and events including the Zeehan and Launceston Gem &  
 Mineral Shows being planned over the period from the 1<sup>st</sup> to the 14<sup>th</sup> of November.

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