



# THE MINERALOGICAL SOCIETY OF NEW SOUTH WALES INC.

C/o School of Natural Science  
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## NEWSLETTER

**DECEMBER 2009**

**The December Meeting will be held on Friday the 4<sup>th</sup> of December 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 December Meeting will be the annual Christmas Social and Swap n' Sell.**

At the December Christmas Social there may be a few announcements made but otherwise no formal program or lecture, the evening being devoted entirely to the sale or exchange of mineral specimens and mineralogical material, books, magazines and equipment.

There will be a substantial and comprehensive range of snack food refreshments organised and provided by Society members, as well as a range of cool and hot drinks, wine and other beverages. Members attending the Christmas Social Meeting are requested to pay \$10 towards the cost of the refreshments.

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## FORTHCOMING MEETINGS

The Society does not hold General Meetings in January. After December 4th 2009 the next Meeting will be on **Friday the 5<sup>th</sup> of February 2010**. Subsequent Meetings will be held on the first Friday of each month through the year except before the long weekends of Easter, - 2<sup>nd</sup> to 5<sup>th</sup> of April, the Queen's Birthday 5<sup>th</sup> to 7<sup>th</sup> of June and the 2<sup>nd</sup> to 4<sup>th</sup> of October 2010.

Subject to circumstances some changes to the following schedule of program subjects and speakers may have to be made in due course.

February 5<sup>th</sup> 2010: Talks on 'Martin Zwer's Scheelite Mine, Nundle, N.S.W.' by John Rankin and on 'Fluorescence of Scheelite and Other Weird Stories' by Jim Sharpe. The talks will be followed by a lecture on 'Magnetic Minerals' by David Colchester. There will also be a sale of mineral specimens donated for the Kids with Cancer charity.

Due to the previous generosity of members donating specimens to be sold for proceeds to be given to the **Kids with Cancer** charity a number of specimens were left over from the last sale. Accordingly at the February 2010 Meeting there will be another **MINERAL SALE** of specimens donated for the charity. The number offered so far does not approach the sixty sold at the last Sale and members are invited to look to their collections to provide a few more donations. In order for a catalogue of the specimens offered for sale to be printed before the Meeting donors are asked to provide a description of the specimens they can donate to Jim Sharpe on telephone (02) 9871 2502 or e-mail [sharpe4min@tadaust.org.au](mailto:sharpe4min@tadaust.org.au) by mid-January 2010.

March 5<sup>th</sup>: 2010 2010 Tucson Show Update. Lecture by Ross Pogson on 'Cave Minerals'.

April 9<sup>th</sup> 2010, (Second Friday, - after Easter): Minitalk by Bruce Myles on 'Zircons from Malawi'. Lecture by Les Bursil on 'Aboriginal pigments and tools'.

May 7<sup>th</sup>: Member's Mini-Auction.

June 4<sup>th</sup>: Talk by John Rankin on 'Mineral Catalogues'. Lecture by Lin Sutherland on 'Forensic Gemmology in N.S.W.'

July 2<sup>nd</sup>: Talk by Meaghan McKinnon on 'Scanning Diamond Drill Core' and a lecture by Jim Sharpe and Peter Williams on 'Ernest Henry. The Man and the Mines'.

August 6<sup>th</sup>: Society A.G.M. Betty Mayne Memorial Lecture to be given by Brian England on 'Minerals of the Garrawilla Volcanics'.

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## 2010 Society Membership Fees:

**Society membership fees are due from January 1<sup>st</sup> 2010.** Subscription renewal forms were sent out with the November Newsletter and more are available from the Secretary or Treasurer at any Meeting. Members are recommended to provide their e-mail addresses if available in the interest of placing as many people as possible within electronic communication, not to mention cutting down the cost of posting out hard copies of the Society Newsletters.

Members are particularly urged to avoid assailing the Treasurer at the Christmas Social with subscription payments presented in cash. This necessitates the Treasurer to be continually writing out receipts for cash payments when he would prefer to be looking at minerals. Members wishing to pay their subscriptions at the Christmas Social are asked to **present a completed renewal form with a cheque payment** when a receipt can be issued later. If the member prefers to pay cash at a Meeting please leave this until February 2010.

The renewal form may also be used to pay next year's premium of \$3.00 for **Personal Accident Insurance**. It should be understood that the period to be covered by any payments made now would be for the period from 4.00 p.m. on September 1<sup>st</sup> 2010 to 4.00 p.m. on September 1<sup>st</sup> 2011.

Information on the degree/s of cover provided by the **Personal Accident Insurance** is available from the Society Secretary or the Gem & Lapidary Council of N.S.W. Inc. The insurance has been arranged for many years by the Council for member clubs and associations through brokers Webster Hyde Heath in Adelaide with QBE Commercial Insurance Ltd and provides a number and scale of benefits for personal injuries.

Any new members who have joined the Society after May 1<sup>st</sup> 2009 are reminded that their subscriptions paid after that date are deemed to keep them financial for the whole of the following year, up to December 31<sup>st</sup> 2010. This would not apply to Personal Accident Insurance which even if paid with the subscription for the Sept 2009 to Sept 2010 period would need to be paid separately for 2010 to 2011 if required.

## THE SOCIETY COMMITTEE

PRESIDENT:	Gary Sutherland	Tel: (02) 9871 1379
VICE-PRESIDENT:	John Chapman	Tel (02) 9808 3481
	E-mail:	<i>chapmanjr@optusnet.com.au</i>
SECRETARY:	George Laking	Tel: (02) 9636 7145
		E-mail: <i>bglaking@tech2u.com.au</i>
TREASURER:	Jim Sharpe	Tel: (02) 9871 2502
COMMITTEE MEMBERS:	David Colchester	Tel: (02) 9449 3862
	Dieter Mylius	Tel: (02) 9477 1060
	Graham Ogle	Tel: (02) 9876 5224
	Arthur Roffey	Tel: (02) 4572 5812
	Peter Williams	Tel: (02) 9685 9914

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## WITH REGRET

With regret the Society Committee has just been informed that a previous Society member, Keith Gregson, passed away on the 8<sup>th</sup> of November. Keith was a member of the Society for some ten years from the mid-1980s to early 1990s joining the Society when he was living in Sydney, moving briefly to Victoria and then to Torrington in about 1992 but remaining a member for a few more years. During his time in Sydney he was regularly seen at Meetings and was also a keen attender, and promoter, of field trips. From the following notice provided to the Society by member Brian Holden it will be apparent that Keith retained a strong and long-time interest in minerals and mineralogy.

*"If you have not heard the news then it's my unfortunate duty to report the sudden passing of Keith Gregson of Torrington NSW.*

*A member of Minsoc in NSW and QLD, Keith ran a small mineral trading shop in Torrington and kept many of us amused both up north and at many shows he visited over the years.*

*Keith passed away on Sunday 08 November in St George Hospital Intensive Care Unit after two emergency procedures on his heart/circulation system.*

*Not only will he be sadly missed by all in the mineralogy fraternity, but the tiny village of Torrington will change forever at the loss of this colourful gentleman.*

*Our thoughts, of course should be extended to his next of kin, family and all his Torrington neighbours. Goodbye Keith and thanks."*

*Brian Holden  
November 2009*

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## NOVEMBER MEETING

At the commencement of the Meeting Arthur Roffey reported that Peter Beckwith had recently bought a very large mineral collection of mainly Australian material including many **Broken Hill and Biggenden** specimens a large selection of which he would be taking for sale at the forthcoming Windsor Show over the 28th and 29<sup>th</sup> of November next.

Naomi Estelle offered a report on the recent field trip to **Mineral Hill** held over the 17<sup>th</sup> to 18<sup>th</sup> October weekend which was very well organised by John Chapman and which included him finding the best restaurant, at the Condoblin Motor Inn, in the small town where most of the party stayed overnight. Adam McKinnon was particularly complimented for having made arrangements with the Kimberley Metals company to allow the Society to hold a field trip to Mineral Hill, for showing and supervising the party over the site, explaining about the mining procedures and processing plant and pointing out where the best specimens were to be found.

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The first talk for the evening was given by Simon Hager who is a graduate at the University of Western Sydney and who has been working for the past year on the ion-exchange properties of the pharmacosiderite group of minerals.

### **‘The Pharmacosiderite Group of Minerals’**

**by Simon Hager**

Pharmacosiderite is a potassium, iron hydroxyl-arsenate mineral,  $\text{KFe}^{+3}_4(\text{AsO}_4)_3(\text{OH})_4 \cdot 7\text{H}_2\text{O}$  and is a member of a group with three other species, baryo-, alumo- and sodium- or natro- pharmacosiderite. Baryo-pharmacosiderite is relatively common whilst the other two species are very rare. Pharmacosiderite crystals are generally cubic and can form crystals up to about two millimeters but are usually smaller. The mineral is known from about 320 localities across the world and the name is derived from the Greek for ‘iron’ and ‘poison’. It can occur in a wide range of colours depending on the proportion and orientation of ferric ions in the structure and in the laboratory can be induced to change colour and back again quite readily over a few minutes with the application of dilute alkali or acid solution or by the application of heat to expel hydroxyl ions and subsequent immersion in water.

The structure of pharmacosiderite is built up of a series of octahedral iron oxide clusters and tetrahedral arsenate groups. The speaker spent some time explaining the disposition of ions and ionic bonds within the mineral unit cell structure indicating among other features the formation of tunnels within the geometric structure that can hold or absorb water or other molecules. The unit cell can be either cubic or tetragonal depending on the orientation of the potassium ions. A lot of work has been done on creating synthetic compounds with the structure of pharmacosiderite because such compounds can be used for absorbing radioactive caesium and strontium isotopes from solutions containing ions of these elements. The compounds are very expensive to make and cannot be synthesized in large quantities compared to the natural minerals which can be made more easily and cheaply.

In answering a few questions at the end of his talk Simon Hager advised that whilst pharmacosiderite could be found in a number of locations it would be in probably very small quantities and there was very little ready means of deciding whether it was iron or baryopharmacosiderite from the colour which might be very variable. The only sure means was by chemical or X-ray analysis.

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The second lecture for the evening was given by John Chapman who had stepped in the place of Paul Meszaros whose work commitments precluded his being able to speak at the November meeting.

### **‘A Photo Journey of Mines and Minerals’**

**by John Chapman**

The speaker announced that he would be describing a little about the techniques for mineral photography, then would take the Meeting on a tour of a number of mines showing pictures of specimens from the various locations and then would finish with a number of views of mineralogically significant places and people.

First shown was a picture of Geoff Scovil who is one of the premier mineral photographers in the world and whom John Chapman was pleased to meet and spend some time with on a visit to the Tucson Show. Some of the techniques shown to the speaker at Tucson were described to the Meeting. Techniques varied according to the type of specimen to be photographed but involved setting up lighting properly with overhead lights, side reflective panels and attention paid to the background to be illuminated. The light source or sources need to be diffuse, a spotlight cannot be used unless it is behind a diffusing screen although directional lighting may be needed to highlight various parts of a specimen. The photograph to be taken must have depth of field so the camera must be set up on a tripod and the picture taken over a very long exposure time with a minimal aperture.

The colour temperature must be correct which can be achieved with appropriate filters, the use of tungsten-light correcting film or the use of flash. However digital photography resolves all the problems with colour temperature because the colour can be adjusted once the photograph has been taken. Various types of lighting were shown varying from professional photo lights, simple quartz-halogen or even a torch, almost any light source as long as it was diffused. For digital photography John Chapman advised against using flash since the light cannot be controlled. Digital processing is really a must to obtain a high-quality photograph and will allow any amount of colour, lighting and blemish-removal adjustments and 'before' and 'after' improvement pictures were demonstrated by the speaker.

The speaker then proceeded to show a number of views of mineral-collecting sites that have been visited on Society field trips and specimens obtained from them. First was Kulnura quarry, north of Gosford on the road to Singleton, with views of the striking columnar basalt jointing and some specimens of calcite and natrolite. Blue Hill quarry south of Oberon had been visited earlier this year. It contained aggregate in sandstone and had narrow quartz veins with some crystals exposed or to be found after some digging. A few views were shown of the field trip people working on the quarry wall and one fellow sat on a camp chair supervising ! and of some of the crystals found, mostly by Doug Austen.

John Chapman had written a thesis on the Peak Hill Gold Mine and had taken a large number of pictures over some time of the mine workings including some aerial and ground views of the open pit. The mine did not provide much specimen material at all and the Society has not held a field trip to the location but the speaker showed a few pictures of small barite crystals and iridescent goethite in the walls of the workings and also one picture of some specks of visible gold. The speaker then moved to the Northparkes mine showing the dumps containing the sampleite which have gradually received the attention of a probably by now large number of collecting groups over several years. He first showed views of the surface workings which had taken out the oxide zone material to prevent this collapsing into the sulphide layers below which were to be mined. This tragically did not prevent such a collapse later and four people were killed including the geologist who had first taken a party of collectors to the sampleite dumps. Photographs of a few fine sampleite specimens were shown.

The speaker has also worked extensively in the Cobar area and had a large number of photographs of the mines, workings and minerals from that area and was able to show a number of these to the Meeting. Another mine area that he had visited further west from Cobar was Broken Hill and the speaker had also obtained a number of pictures of specimens from some of the more notable collections of Broken Hill minerals.

Another area the speaker had visited was Zeehan and views were shown of the Adelaide Mine with a few pictures of fine crocoite specimens and layers of the mineral in situ in the mine workings. Finally John Chapman showed a series of photographs of minerals from various sites around the country, of cassiterite on quartz from Tingha, pyrite from Mt Bolga, prehnite from Mullaley, chalcotrichite from the Browns Creek Mine near Orange, specimens from Mt Elliot and a number of other sites.

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## **FORTHCOMING EVENTS**

### **WINDSOR BEADING GEM & MINERAL SHOW**

Over Saturday 9:30 – 5.00 pm & Sunday 9:30 – 4.00 p.m., 28th and 29<sup>th</sup> of November 2009.

At the WINDSOR FUNCTION CENTRE on the Corner of Dight & Macquarie Streets, Windsor.

Sales of mineral specimens from all over the world. Also gemstones, beads, opals, gem rough, carvings, crystals, fossils, jewellery and findings, lapidary and beadings tools, equipment and materials. Demonstrations of gemstone faceting, jewellery crafting. Displays of private collections of minerals, gemstones, cut and polished stones, carving, lapidary and other hand-crafted work.

Admission \$5, unaccompanied children \$1, with parents - enter free. Light refreshments. Lucky Door Prize of a 9ct Gold & Sapphire pendant. Prize drawn at 3.30 p.m. on Sunday the 29<sup>th</sup>.

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### **ILLAWARRA LAPIDARY CLUB 2010 ROCK AND MINERAL FAIR**

Sunday 28<sup>th</sup> February 2010

Members of the Illawarra Lapidary Club sell minerals, fossils, lapidary work, jewellery, books, equipment and other wares. "Rock Scramble" around mid-day for children and young people.

In Stuart Park, by the beach at North Wollongong, 8.30am-2.00pm.

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### **BACK FROM TUCSON MINERAL SALE**

Over Saturday and Sunday the 27<sup>th</sup> and 28<sup>th</sup> of February 2010 from 10.00 a.m. to 5.00 p.m.  
at 52 Macpherson Road, Londonderry.

Inquiries to Peter Beckwith on 0412 333 150

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### **MINERAMA 2010**

In the Glen Innes Showgrounds over the March 12<sup>th</sup> to 14<sup>th</sup> weekend

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### **GEMBOREE 2010**

Easter 2010. Friday to Monday, April 2<sup>nd</sup> to 5<sup>th</sup>, at Devonport, Tasmania.

Inquiries to the Gemboree 2010 Secretary, P.O.Box 996, Launceston, Tasmania 7250.  
For travel and accommodation bookings contact the Devonport Visitor Information Centre,  
Telephone : - 1800 649 514 and mention the Gemboree.

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## **GEMBOREE 2011**

Easter 2011. Friday to Monday, April 22<sup>nd</sup> to 25<sup>th</sup>, at Bathurst.