



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

C/o School of Natural Science  
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**NEWSLETTER**

**OCTOBER 2012**

**The October Meeting will be held on Friday the 5th of October 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 for the October Meeting will commence with the

**‘Members Forum. Collections and Recollections – Kingsgate’**

Members are particularly invited to bring in specimens, information, collecting experiences and anecdotes from this significant and productive site.

The response by members recommended to bring in specimens for the September Meeting program segment **‘Amethyst. The Pretty and the Unusual. Display by Members’** was very encouraging with a very impressive display provided. We are hoping that the same if not a greater response will be forthcoming for the **Kingsgate Members Forum**.

The display will be followed by a lecture and photographic montage by Gary Sutherland on : -

**‘The Museums of England’.**

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**FORTHCOMING MEETINGS**

Society General Meetings will be held on the first Friday of each month for the rest of the year. Subject to circumstances some changes to the following schedule of program subjects and speakers may have to be made in due course.

November 2nd: There will be a lecture on 'New Minerals from Australia' to be given by Peter Leverett who will be referring to all the recent additions of minerals from Australia, going back a few years.

December 7th: Annual Christmas Social and 'Swap n' Sell.

February 1st 2013: 'Minerals of Arizona'. Montage of photographs by Paul Melville, introduced and described by John Rankin.

March 1st 2013: Tucson Update report to be given by Peter Beckwith or Peter Williams. The report will be followed by a lecture to be given by George Stacey on - 'Mt Isa - The Mine in the Spinifex'.

April 5th 2013: Lecture on 'Mercury Mining in Australia' by Professor Ken McQueen

May 3rd 2013: Members Mini-Auction.

June 8th to 10th June 2013: **National Mineralogical Societies Joint Seminar.**

June 14<sup>th</sup> 2013: Because the 2013 Seminar is being held in Sydney over the first weekend of June the Society General Meeting will probably be deferred to the second Friday of the month.

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## The SOCIETY COMMITTEE

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	Gary Sutherland	Tel: (02) 9871 1379
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## SEPTEMBER MEETING

### 'Amethyst – The Pretty and the Unusual. Display by Members'.

At the commencement of the September Meeting the President, Dieter Mylius, paid particular compliments to the members who had responded to the request to bring in specimens of amethyst to display and who had provided a stunning and mouth-watering display. The specimens included a large geode weighing several tens of kilos brought in with the aid of a trolley and a large number of other, table-display size specimens, many with very deep colours and some with unusual and rare forms. There were three scheduled speakers and several other members who contributed information on the specimens which they had brought in to display.

Jim Sharpe spoke first advising that he had been enthused to recommend that an evening program should include a display about amethyst after he had visited Society member Jeanette Munsell and observed her collection which included several unusual amethyst specimens, including the large geode which she and her husband Bill had recovered from a site in the Cloncurry area of Queensland.

Jeanette Munsell was invited to describe this acquisition. The Munsells had made two visits to the site over two years and on the second visit Bill had gradually dug into a cavity that had previously been investigated by them and others and in the interim had been graded by the Mines Department which had partially filled in the excavation. However after an obviously considerable amount of work Bill Munsell had eventually dug down about ten feet to finally locate and dislodge the geode and they then attended to the further considerable task of moving it out of the hole to their car. Visits were then made to a Mt Isa timber yard for a large box and amount of wood shavings to pack around the specimen and then to a carpet supplier for a piece of carpet to wrap it in and after it spending three weeks in their car the Munsells returned to Sydney. They were then able to set about cleaning the geode over about three months with water and acid with the result which had been brought in to display to the Meeting.

John Behrens spoke next, initially describing his 27-year acquaintance with the Munsells and paying compliments to Bill Munsell's considerable interest, time and effort spent over that time in looking for and collecting specimens on field trips, often of sapphires but also of amethyst. John then related some of his own considerable experiences in looking for and trying to dig out specimens in various places around Australia and also about the obvious enthusiasm of other collectors met along the way many of whom had expressed an interest specifically in amethyst which was obviously a generally highly regarded mineral.

In regard to dealing with many of the hazards encountered in the bush when looking for specimens, from sore throats or minor abrasions or injuries such as hitting ones's fingers with a hammer when trying to break rocks, John Behrens from his experience commended the value of tea-tree oil to treat all of these problems. He did not however say whether tea-tree oil was also useful for snakebites !

Lin Sutherland, appropriately wearing a purple sweater, advised that there were many theories offered to account for the purple to violet colour of amethyst. The word itself comes from a combination of Greek words *ἀ* 'not' and *methystos* 'drunk' - meaning 'not drunk'. Greeks made some of their drinking vessels from amethyst which could be filled with water when it would then appear that a person was drinking wine but not becoming intoxicated.

There have been many speculations about the origin of the colour of amethyst ranging from the supposed presence of hydrocarbons, titanium or manganese but most theories acknowledge that iron is involved. Inclusions of iron minerals, haematite, magnetite, limonite and siderite etc are not uncommon in quartz and the weight of evidence is that iron was the main trace element in amethyst. This was not the whole story since it was found that for an amethyst colour to form the quartz has had to be irradiated with gamma rays. These would act on the trace iron atoms and convert them to  $Fe^{+4}$  ions which alter the light absorption properties of the quartz. Amethyst exposed to sunlight will fade due to the ultraviolet light component and if heated to about 260degC the iron ions will revert to the normal ferric  $Fe^{+3}$  state and provide the yellow or brown colour of citrine or smoky quartz.

Lin Sutherland referred to several papers which he had down-loaded from Websites about amethyst and other varieties of quartz and which would provide anyone wanting further information with references to examine. The Internet has a wealth of information about amethyst. Some of the sites referred to were:- The Quartz Page: Amethyst. : - <http://www.quartzpage.de/amethyst.html>. Mindat :- <http://www.mindat.org/min-198.html>. Information of a more technical nature is available on hyperphysics websites : - <http://www.hyperphysics.phy-astr.gsu.edu/hbase/minerals/amethyst2.html>

Arthur Roffey related a story about a substantial coup that he had made in acquiring a very significant quartz specimen at the Tucson Show some twenty-five years ago. He had found a new Brazilian dealer there for the first time who had three or four eight-foot tables covered in what the collectors call 'formation pieces'. The dealer was selling all of these for US\$29 a kilo and Arthur picked out a few including a cabinet-size specimen which needed cleaning. Back in the motel room he set about cleaning the specimen by placing it in the room bath-tub and turning the shower on for a while. - As one does in Tucson motels with acquisitions that need cleaning, so he assured the Meeting!. The specimen once cleaned was revealed to have a very complex formation of several groups of quartz crystals arranged in tripod 'spokes' on a base of crystals. In showing the specimen to a more prominent Brazilian dealer who became very enthused with it Arthur was offered about eight hundred times what he had paid although happily declined this, kept the specimen and had brought it into the Meeting to display.

A few other members contributed collecting experiences. John Chapman described managing to collect a specimen of what he called not very spectacular amethyst from Mt Elliot on a trip with Jim Sharpe and Peter Williams. A company was then mining the Corbould Vein and the specimen of amethyst sitting on a matrix of chalcopyrite ore was on the dump. At that time very fine blocky diopside crystals coated with amethyst were being recovered from the site although unfortunately the speaker was not able to obtain any of those. Graham Ogle described collecting at Allandale, about 20kml from Maitland, of a number of specimens of pale amethyst covered by calcite which could be removed by acid treatment. Not very deeply coloured material he admitted but a source not far from Sydney.

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The Meeting was handed over to the main speaker for the evening who was to speak on : -

### **'Gem Analysis'**

#### **Sylvia French**

Sylvia French had brought in a large selection of gemstone examination and identification equipment which after describing these to the Meeting then invited members to split into small groups to examine the equipment and methodology more closely. The equipment displayed comprised a number of items including a microscope although the speaker stressed that much gemstone analysis can be conducted by a few instruments contained in a box about the size of a lunch-box. The smaller instruments included a polariscope, refractometer, hand spectroscope, dichroscope, colour filters, UV lamp and a 10x loupe. Larger instruments would include an accurate balance and the microscope.

The speaker initially stressed that in testing gemstones the tests had obviously to be non-destructive or damaging in any way to the stone. Accordingly the primary method to analyse a gemstone is to use light and the gemologist will first make use of his or her 10x eye lens or microscope to thoroughly examine the stone. Then the gemologist will move to other instruments one of the more important being the refractometer to obtain the refractive index of the stone and an accurate balance to establish the specific gravity. The second of these tests would only be applicable for a stone which was not mounted in a setting whilst the R.I. could probably be found of a stone in a setting as long as a flat surface or facet could be examined.

With the aid of a number of images projected on an overhead screen the speaker worked through the mode of operation of the other instruments explaining the background to the various optical and crystallographic features being examined. The feature of gemstones containing inclusions which may often be specific to the particular species of stone was pointed out and explained, also with the aid of projected images of examples. Specific inclusions may also serve to identify the geographic source of a

stone. After dealing with a number of questions on gemstone identification Sylvia French discontinued her formal lecture and recommended that members break up into small groups for her to show them in turn the various gemological instruments and how they were used.

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### **What's Hot in Tucson: Dvd**

An interesting item has been received by the Society with the July/August issue of the **Mineralogical Record** comprising a folder with two dvds titled '**What's Hot in Tucson**'. The dvd folder is apparently a complimentary offer to the Society from the producers and provides four hours of filmed commentary and spectacular mouth-watering views of some of the best mineral specimens that were on view at this year's **Tucson Gem & Mineral Show** in February. The commentary and minerals shown are from the various dealer booths and displays, in the motels scattered around the town and then some of those in the main Show. The commentator and cameras do not go all around the main Show to look at the museum and other institution displays and show cases, they only go to the dealers whom they can talk to and who can take some of the best specimens out of their display cases to look at and discuss them.

The dvds are produced by **BlueCap Productions**, sponsored by a number of the bigger dealerships at Tucson and the current one is the sixth in a series. **BlueCap** have produced a wide range of mineral and collecting-oriented dvds such as of the Munich Show and of many of the larger dealer, collector and local shows around America. The 2012 'What's Hot in Tucson' dvd may be ordered from **BlueCap** for US\$29.99, or US\$184.89 for the full set. (The 2011 Tucson Show dvd is also US\$29.99 whereas the 2010 Tucson dvd comprises three discs for US\$39.99). Further information on **BlueCap** products may be found on the Website : - [info@bluecapproductions.com](mailto:info@bluecapproductions.com)

In the meantime the current dvd may be borrowed by Society members for viewing although it is likely that a number of members may wish to see it and most may have to wait a little time.

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## **FORTHCOMING EVENTS**

### **ANNUAL GEM FESTIVAL by the CENTRAL COAST LAPIDARY CLUB**

Saturday & Sunday October 13th & 14th at the Mingara Recreation Club,  
Mingara Drive, off Wyong Road, Tumbi Umbi.

Saturday 13<sup>th</sup> 9.00 am to 5.00 pm, Sunday 14th 9.00 am To 4.00pm  
Club Competition and dealers selling tools and equipment.  
Beads, Crafts, Minerals, Faceting And Cabbing Materials.

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## **GEM SHOW 2012**

**By the Northern Districts Lapidary Club**  
**Theme: 'The Origin of Gemstones'**

Friday, Saturday & Sunday, the 26<sup>th</sup>, 27<sup>th</sup> & 28<sup>th</sup> of October 2012.  
 In the Beecroft Community Centre, Cnr Beecroft & Copeland Roads. Beecroft.  
 Gems, Jewellery, Minerals, Fossils, Slabs, Lapidary Books, Machinery,  
 Workshop Demonstrations, Plants, Free Light Refreshments.  
 Small entry charge. Inquiries to : -  
*www.ndlapidary.org.au* Telephone 9484 0014 or 9878 4073

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

Saturday & Sunday, November 24<sup>th</sup> & 25<sup>th</sup> 2012  
 In the Windsor Function Centre on the corner of Dight & Macquarie Streets, Windsor.  
 Next door to Windsor Public School.

Saturday open from 9.30 a.m. to 5.00 p.m. & Sunday from 9.30 a.m. to 4.00 p.m.  
 Admission \$5, children \$1. Light refreshments.  
 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.  
 Inquiries to Peter Beckwith on 0412 333 150.

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## **GEMBOREE 2013**

### **AUSTRALIA'S 49TH NATIONAL GEM AND MINERAL SHOW**

Easter 2013 from the 29<sup>th</sup> March to 2<sup>nd</sup> April 2013

In the Murray Bridge Showgrounds on the Princes Highway at Murray Bridge, South Australia

Hosted by the Gem & Lapidary Clubs Association of South Australia Inc under the auspices of the  
 Australia Federation of Lapidary and Allied Crafts Association Inc (AFLACA).

### **Gemboree 2013 Activities**

'Trade Dealers. A huge range of dealers specialising in everything from gems and minerals to fossils and findings have been invited to attend Gemboree 2013.'

'Micro-Mounting. This year in South Australia we have provided a specific location for those who undertake the art of micro-mounting.'

'National Gem and Mineral Competitions. Gems, jewellery, lapidary and allied arts and crafts together with fossils and minerals will compete for national honours.'

'Field Trips. Visits are being planned to fossicking sites and to specific sites for detectors and treasure-seekers.'

Enquiries to : -  
 The Gemboree Convenor – *sagemboreeconvenor@gmail.com*  
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 Murray Bridge Visitor Information Centre. Telephone (08) 8539 1142  
 Website *www.murraybridge.sa.gov.au*

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## **THE 36th NATIONAL MINERALOGICAL SOCIETIES JOINT SEMINAR 2013**

The 2013 Seminar is being hosted by the Mineralogical Society of N.S.W. Inc in Sydney over the Queen’s Birthday long weekend, Saturday 8th to Monday 10th of June 2013 on the theme : -

### **‘The Wonderful World of Minerals’**

The Seminar will be held in the Eastwood – Ryde Leagues Club in Ryedale Road, Eastwood. All Seminar activities other than field trips or Australian Museum and private collection visits will be held in the Club which has substantial convention and catering facilities. Activities will include the Seminar dinner on Saturday evening 8th of June and mineral and micromount displays and sales probably on Monday the 10<sup>th</sup> of June.

Interstate visitors and attendees from outside Sydney will be advised about suitable accommodation in the Eastwood area which has a number of hotels. It is hoped that there will be field trips to one or more locations held in conjunction with the Seminar but details have not yet been finalised.

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