



# THE MINERALOGICAL SOCIETY OF NEW SOUTH WALES INC

C/o School of Natural Science  
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## NEWSLETTER

**MAY 2014**

**The May Meeting will be held on Friday the 2<sup>nd</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 May 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. The Meeting will start at 7.30 p.m. sharp and after any announcements the auction will commence immediately and will probably last about two hours.

A list of 90 specimens to be auctioned will accompany this Newsletter. Specimens will be on display for examination from 7.00 p.m.

Members bringing in minerals to sell at the auction should arrive well before 7.00 p.m. to lay out the specimens for inspection by buyers. The specimens should be clearly labeled with the owner's name as well as the species and locality and before the sale commences specimens will be allocated the auction number corresponding to the accompanying list.

Prospective buyers should also arrive well before the sale commences to allow time to examine the lots and members who wish to bid will be allocated a bidding number. Please make sure you are given one. Members should bring their copies of the Auction list with them but there will extra ones available.

There would be no cost to sellers, the Society will take no commission on sales, will not handle any money and will not take responsibility for ensuring transactions are completed or enter into any disputes should they arise. There will be no reserve on specimens but if a vendor is dissatisfied with the final bid, he or she can make a higher bid themselves in order to retain the specimen.

**Buyers please note**, the Society or any specimen sellers do not have credit card payment facilities. Transactions must be by CASH ONLY and paid directly to the vendor at the completion of the auction.

A **SILENT AUCTION** will also be held. Members may bring a mineral or trays of minerals to sell and place them on a table at the rear of the Meeting room. They should write their name on the tray or trays and on a bid form for each tray, the forms will be provided. Bidders may examine the trays during the auction and then write their name and bids on the bid form, the highest bid by the end of the evening obtaining the tray. There is no need to notify details beforehand of the minerals in the trays, just bring them to the meeting and place a Silent Auction bid form on your box and your name on the form.

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## 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.

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 David Colchester on : - **‘Mudgeeite. Establishing a New Mineral’.**

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.**

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## FIELD TRIP: MAY 2014

There will be a **Field Trip** to the Mt Tennyson molybdenite mine site over Saturday 24th May and to an old copper mine at Essington on Sunday 25<sup>th</sup> of May next. The party will meet in Yetholme alongside the Great Western Highway between Lithgow and Bathurst. Overnight accommodation should be arranged individually, ideally in Oberon where there are a number of motels, since the organisers are intending that the party should assemble for a Saturday Night Group Dinner at the Oberon RSL.

A map of the meeting place in Yetholme and a detailed program schedule and description will accompany this Newsletter.

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## The SOCIETY COMMITTEE

PRESIDENT:	Dieter Mylius	Tel: (02) 9477 1060
VICE-PRESIDENT:	John Chapman	Tel: (02) 9808 3481
	E-mail:	<i>chapmanjr@optusnet.com.au</i>
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TREASURER:	Graham Ogle	Tel: (02) 9868 4446
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COMMITTEE MEMBERS:	David Colchester	Tel: (02) 9449 3862
	John Rankin	Tel: (02) 9482 7474
	Gary Sutherland	Tel: (02) 9871 1379
	Jeremy Taylor-Edwards	Tel: (02) 9889 5889
	Edward Zbik	Tel: (02) 9638 6586

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## WELCOME

Welcome to new member Arthur Payne of Schofields

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## Changes to fossicking permits for NSW State forests

The **NSW Gem & Lapidary Council** has been notified that the Forestry Corporation of NSW Inc has made changes to the permit system for fossicking in NSW State Forests. The notification provided by the Council to associated clubs and societies is as follows: -

'You can now apply online for a single 12-month permit to fossick in NSW State forests. The new State-wide permits cost \$25 plus GST and up to five people in a family group, (two adults and three children under 18 years of age), may fossick under a single permit.

Valid regional permits may be used State-wide until they expire, providing you review any updated conditions and download up-to-date maps showing where fossicking is not permitted from Forestry Corporation's website. When fossicking in State forests, you must adhere to all relevant legislation, guidelines, permit conditions and maps. For more information or to apply for permits, visit [www.forestrycorporation.com.au](http://www.forestrycorporation.com.au) '

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## The APRIL MEETING

A few announcements were made at the start of the April General Meeting. The President, Dieter Mylius reminded members about the **Canberra Rock Swop** being held over the immediately following weekend. He also advised that the **MicroMineral Group** now meets regularly on the second Saturday of each month, the next meeting would be held at Brian England's house in Maitland with the theme of 'Russian Minerals'. Members interested in attending should advise Dieter Mylius or Graham Ogle.

There was an advance announcement about a forthcoming **Field Trip** being planned for the end of May to the Mount Tennyson area between Lithgow and Bathurst and Jim Sharpe addressed the Meeting to remind members about the forthcoming **May MiniAuction**. He hoped to see minerals being offered for sale from a wider number of people than the few usually selling and urged more members to become involved and to look for their surplus specimens.

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John Chapman introduced the speaker for the evening. David Foster works at the Geological Survey in the Dept of Trade and Investment which is the old Mines Department. The speaker obtained his PhD on the Cadia Deposit near Orange from Newcastle University in 2004 and took up employment at the Survey in Maitland. He had a number of talents being also an accomplished violinist and an expert fisherman whereas, according to John Chapman, his golfing ability was “a little misdirected”.

## **‘Skarn Type Mineral Deposits’**

### **Dr David Foster**

Over the course of his lecture Dr Foster delivered a detailed and informative description of skarn deposits particularly in reference to the Cadia area with which he was very familiar. The lecture went into considerable technical detail and was extensively illustrated by a series of images, of skarn landscapes, of the workings at Cadia from many years ago to present day, with diagrams of mineral and chemical movements and deposition and of some of the minerals found in skarns.

A Swedish geologist, Alfred E Törnebohm (1838 – 1911), having worked extensively on rock formations in Scandinavia provided the first description of skarns and effectively established the word in the geological literature. It is from older Scandinavian useage and meant gangue, mud or even dung. Gradually by a hundred years later into the 1980s workers had provided detailed classifications primarily referring to the mineralogy.

A significant worker on magmatic hydrothermal systems, particularly skarns, Larry Meinert of Smith College Massachusetts, basically said that all sorts of formations could be regarded as skarns in regard to intrusions and the movement of fluids derived from metamorphic processes. The speaker however preferred the explanation provided by Prof David Lentz of the University of New Brunswick in Canada about mineralized skarns where components have been introduced into rocks characterised by calc-silicate and magnesium gangue mineralogy.

Dr Foster suggested that the simplest explanation of a skarn was that it forms in reactive carbonate rocks as the result of interaction with fluids related to an intrusion infiltrating the rock. Whilst there are a number of varieties depending on the contained mineralogy a skarn is basically a metamorphic rock formed by contact with granitic igneous rocks intruding into carbonate rocks. Hot fluids derived from the igneous intrusion are rich in silica, iron, aluminium, and magnesium and mix in the contact zone and convert the carbonate rock to skarn in a process called metamorphism.

Skarns accordingly are calcium-containing silicate rocks and depending on the composition of the intruding igneous rock and the fluids emanating from it may contain a large variety of minerals but predominantly garnet and pyroxene. In addition skarn minerals may include wollastonite, actinolite, idocrase, hematite and epidote and more uncommon minerals such as tourmaline, topaz, beryl, corundum, fluorite, apatite, barite, strontianite, tantalite and anglesite.

If the intruding fluids also carry metals such as iron, copper, zinc, lead, gold etc, these may accumulate as recoverable ore. The rock would then be referred to as a skarn deposit. There has been no really significant production of industrial minerals from skarns but the speaker felt that there was great potential. Skarns in association with porphyry deposits are much more important. There are many porphyry deposits around the World, they are economically very important and these days supply much of the World's copper and gold. They are usually very low grade but have become important due to the application of large extracting and processing machinery.

One example of a skarn in association with a mineralised porphyry is the OK Tedi deposit in Papua New Guinea and a number of diagrams and images of the deposit and of the mine were shown. The speaker then moved on to describe the Cadia deposit near Orange in New South Wales also showing a large number of images of the mine from over ten years ago when he first started studying the area and a number from the very early years of small-scale operating to images up to the present day showing very large-scale operations. Currently Cadia is Australia's most profitable mine.

Dr Foster described a little of the early history of Cadia the mineralisation at which was discovered about the 1880s and at one point during the early 1900s was being mined for its iron ore, which was for a time more significant than the copper with some gold known to be in the area. With the aid of images and diagrams he then explained at length and in detail much of the geology and mineralogy of the larger deposits, Cadia Hill having been worked out years ago but other very large deposits notably Cadia East having been opened up over the last decade or two.

In conclusion Dr Foster advised that skarns were really very interesting. They have an abundance of components from their source rocks and are excellent environments for forming a variety of interesting minerals including many beautiful and valuable collectables.

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After the main lecture was concluded John Chapman took the floor to describe in some detail the display of skarn minerals which had been brought in to help illustrate the lecture. There were a number of specimens from Mt Tennyson near Yetholme, NSW, notably some powellite which is interesting to collectors for its fluorescence. Other specimens were of copper minerals from Etunga, and pyrite specimens from 'Old' Cadia, collected on a Society field trip many years ago. Another trip had produced many specimens of garnets for members from the skarn site at Duckmalloi near Oberon. Then John Chapman referred to having seen a magnificent cuprite specimen from Cadia in the late Laurie Lawrence's collection.

The speaker next drew attention to a gold ore specimen from the Lucky Draw gold mine near Burruga and then a few samples of wollastonite with garnet from Brown's Creek gold mine near Blayney. Other specimens were of garnets from China, a diopside with garnets from the Mt Elliot mine in Queensland and a scapolite also from Queensland and although the speaker was doubtful that all these had come from skarns they were typical of minerals from that type of formation.

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## **FORTHCOMING EVENTS**

**The Lismore 24<sup>th</sup> Annual GEMFEST**

## **GEMFEST**

The Lismore Gem & Lapidary Club will be presenting their 24th annual GEMFEST  
at the Lismore Showground over Saturday 17th & Sunday 18th May 2014

'The time is approaching again for the biggest annual lapidary show in the country – if you haven't been before, give us a try. If you have been, then we would love to see you again.

We will have a full dealers pavilion again, with a good mix covering all areas of the hobby – many of the dealers have been regulars here for a long time. For both dealers and tailgaters we normally have a waiting list of people looking for spaces. Here again, many of our tailgaters are long term regulars.

Enquiries re Tailgating should be addressed to Jan Thompson at PO Box 743, Lismore, NSW 2480.  
Dealer and general enquiries can be sent to Bruce Copper at the same address, or by email to  
*bcopper@bluemaxx.com.au*

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

Saturday & Sunday 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

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## **GEMKHANA 2014**

### **A WORLD OF GEMS**

The Annual Gem & Mineral Show and Competition of Lapidaries from all over NSW,  
presented by the Gem & Lapidary Council of NSW Inc

To be held in the Goulburn showground-Recreation Ares, Braidwood Road, Goulburn  
over the Labour Day Weekend of Saturday to Monday, October 4<sup>th</sup> to 6<sup>th</sup>.  
From 10.00 am to 5.00 pm Saturday & Sunday, 9.00 am to 12 noon on Monday.

Sales and Displays of Jewellery, Gemstones, Minerals, Crystals, Fossils, Beads, Equipment  
by local and interstate Gem, Jewellery and Mineral Dealers.  
Demonstrations of Gem Faceting, Gem Identification, Gemstone Carving.

Contacts for inquiries: - Marilyn or John Behrens on (02) 9635 8218 or Arthur Roffey on 02 4572 5812

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