



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

C/o School of Natural Science
B.C.R.I. Parramatta Campus, Western Sydney University
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Website: www.minsocnsw.org.au

NEWSLETTER

AUGUST 2016

The August Meeting is the Society ANNUAL GENERAL MEETING and will be held on Friday the 5th of August 2016 at 7.30 p.m. in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville.

2016 ANNUAL GENERAL MEETING

The A.G.M. will commence at 7.30 p.m. with the President's report for 2015/2016 followed by the Treasurer's report, presentation of the annual financial accounts for the previous financial year and the election of the Society Committee and office-bearers for 2016/2017.
The minutes of the 2015 A.G.M. were distributed in the September 2015 Newsletter.
During the A.G.M. any other business may also be raised and discussed.

The Election of Office-Bearers for 2016/2017

In accordance with the Society Constitution the entire current Committee retires at the commencement of the A.G.M. and all positions are open for election. Nomination forms for election to the 2016/2017 Committee were circulated with the July Newsletter and nominations should have been received before the commencement of the A.G.M. A member can be nominated for but cannot hold more than one position. Only financial and Honorary Life members of the Society are eligible for nomination or allowed to participate in any voting.

After the A.G.M. has been concluded the Betty Mayne - Edna Walker Memorial Lecture will be given this year by Brian England who will speak on : -

'Mineral Curiosities'

FORTHCOMING MEETINGS AND PROGRAMS

Meetings will be held on the first Friday of the months throughout the year.

- September 2nd : The program will commence with mini-talks to be given by Jim Sharpe on the **Triple Chance Mine** and by Peter Williams on **Pegmatite minerals**.
Members are invited to bring in examples of pegmatite minerals to display.
The talks will be followed by the **Mineral Quiz** organised and presented by Noel and Ann Kennon.
- October 7th: ‘**4.5 Billion Years of Mineral Evolution**’ by David Colchester
- November 4th : Lecture on ‘**Meteorites**’ by Ross Pogson
- December 2nd : **Christmas Social**
- February 3rd 2017: Lecture on ‘**Radioactivity and Minerals**’ by Geoff Parsons.
- March 3rd 2017: Lecture on ‘**The Milton Lavers Collection**’ by Paul Carr.
- April 7th 2017: Lecture on ‘**19th Century European Minerals in the Australian Museum**’
by John Rankin.
- Mau 5th 2017: **Members Mini-Auction.**

The SOCIETY COMMITTEE

PRESIDENT:	Dieter Mylius	Tel: (02) 9477 1060
VICE-PRESIDENT:	John Chapman	Tel: (02) 9808 3481
SECRETARY:	George Laking	Tel: (02) 9636 7145
	E-mail:	<i>bglaking@tech2u.com.au</i>
TREASURER:	Graham Ogle	Tel: (02) 9868 4446
	E-mail:	<i>grahamo@diabetesnsw.com.au</i>
COMMITTEE MEMBERS:	Peter Beddow	Tel: (02) 8810 8446
	David Colchester	Tel: (02) 9449 3862
	Geoff Parsons	Tel: (02) 9548 3289
	John Rankin	Tel: (02) 9482 7474
	Edward Zbik	Tel: (02) 9638 6586
	E-mail:	<i>etzed@optusnet.com.au</i>

FIELD TRIPS

There are a number of Field Trips being planned for the next few months but in addition to the following any suggestions from members or offers to make inquiries about or offers to organise a visit to a significant site would be appreciated.

13/14th August the 3rd Winter Camping at Mt. Tennyson, between Lithgow and Bathurst.
Camping on private property. \$10 entry fee applies per day, with option to camp.
Early birds can drive in on the 12th. **OPEN TO ALL MEMBERS**

23/24/25th September, Joint Field Trip with the Illawarra Lapidary Club to Muttama, - between Cootamundra and Coolac, north of Gundagai. For clear quartz crystals. Camping on private property. OPEN TO ALL MEMBERS

For information see the report on a previous visit to Muttama in the Oct 2015 Newsletter: - http://minsocnsw.org.au/newsletters/MinSoc_Newsletter_Oct15.pdf

Member's Field Trips:

Ed is going overseas for September and October and so other members have the chance to organise a field trip in October/November for a day or two to any locality of known minerals that you may have access to or visited in the past. Notice must appear in the MinSoc Newsletter with contact details of organizer. Closing date for the newsletter is Friday of the week before the next General Meeting.

The Tolwong Mine and Bungonia State Conservation Area Science Licence has been extended. Plan two reconnaissance trips and possibly three collecting trips between November 2016 and June 2017. This involves backpack bush walking and camping within the Bungonia and Morton National Park. Minerals collected may be consigned to the Australian Museum. Note: It is not permitted to collect minerals in National Parks and doing so may result in fines and other penalties.

OPEN TO ALL MEMBERS. Contact Ed to be placed on the "Interested list".

2017 Field Trip Program.

If you know a landowner with a mineral occurrence or have contacts with a commercial mining or quarrying company, we would like to hear from you.

To register for any event above, e-mail etzed@optusnet.com.au or phone Ed on (02) 9638 6586 or Mobile: 0401 538 480.

Regards Ed

The JULY MEETING

The Meeting was opened by the Vice-President, John Chapman, in the absence of the President, Dieter Mylius, who was in Africa.

Ed Zbik reported on several forthcoming **Field Trips**, to Sunny Corner, Lithgow and Oberon over the 22nd to 24th weekend of July and later ones being planned, to Mt Tennyson in August which would be a camping trip, and to Tolwong. He also recommended to members that they consider obtaining Kevlar-reinforced boots for wearing when fossicking.

Graham Ogle reported that the next **Micro-Mineral Group** meeting would be on the 16th of this month at John Behrens house and the theme would be on 'Unknowns'. Any members who would like to attend the meetings or obtain more information were urged to contact G.Ogle and also to provide their e-mail addresses to be informed of future meetings. A selection of micro specimens had been brought to this General Meeting and the Society microscope set up to demonstrate these. Members were warned that of the two adjusting wheels on the side of the microscope column stand one only was for focusing and the other was a lock which would need to be released to allow the focusing to be made.

John Behrens announced that Society founding member **Arthur Roffey** had sustained an accident whilst working on his garage and injured his foot. At the time he was in Nepean hospital receiving treatment and a general check-up. [*Inquiries made later found Arthur returned home after having spent a few days in hospital and recovering satisfactorily*]

Brian Holden drew member's attention to the forthcoming October long weekend and that there were a number of mineralogical-significant events taking place over the period. There was the annual **Joint Mineralogical Societies Seminar** being held this year in Brisbane, the **Gemkhana** at Clarendon near Windsor, the **Emmaville Gemfest** and the **Broken Hill 'Rock-On'**.

'Mineral of the Month: GOLD'

John Chapman

The talk on the Mineral of the Month was given by John Chapman who referred to a number of projected images of gold specimens commencing with one of a fine 4¹/₂ cm nugget found at Nundle and now held with a number of others in the Geological Survey collection. Gold occurs World-wide in a huge range of geological environments, many having involved the gold having been transported from somewhere else, most often by hydrothermal activities from depths, and concentrated in areas nearer or at the surface. Concentrations may then have been subjected to alluvial action.

Referring to a list of types of gold deposits the speaker described these as sulphide, epithermal, porphyry and carbon-type deposits, the result of large hydrothermal systems. Eluvial deposits are ones where the gold is on the move, being currently eroded from existing deposits and supergene deposits are ones having formed in oxide zones near the surface. Another type of deposit is in 'greenstone' belts mostly in archean rocks such as in Canada. The Witwatersrand area in South Africa has held the World's greatest accumulation of gold in archean conglomerate rocks and up to thirty years ago had produced about half the World's total. The origin of the gold in the South African field is uncertain, some geologists suggesting a hydrothermal and others a placer process.

Currently China is the World's largest producer of gold, mainly from mines in the Shandong Province; followed by Australia, (mainly from W.A.); Russia, (many mines in Siberia and the Far-East province); the U.S., (predominantly from mines in Nevada); and South Africa – from the Witwatersrand.

Most of John Chapman's talk comprised describing images which he projected of Australian gold specimens now in various museums and such collections as that of the Geological Survey. Images were shown of the 10.7 kg Maitland Bar nugget, discovered in 1887 in a creek to the north of Hill End and currently on display in the Australian Museum. Other images were of nuggets from sites in South Australia, Lucknow and Peak Hill often including the quartz, calcite or goethite with which they were found associated.

After the talk on Gold Peter Williams introduced the lecturer for the evening, Society member Adam McKinnon. Peter Williams had first met Adam McKinnon when the latter was an undergraduate at Western Sydney University studying chemistry and geochemistry, continuing on to study for his honours degree and then his PhD. After graduating Adam has worked at Mineral Hill and latterly in the Nymagee area in central NSW. Appropriately in following a talk on Gold Adam would be speaking this evening about a new gold, with lead, zinc and silver mine.

‘The Hera Gold-Lead-Zinc-Silver Mine at Nymagee

Adam McKinnon

The Hera mine project is situated approximately 100 klm south-east of Cobar near Nymagee in central NSW and is being developed by the Aurelia Metals Company. Adam McKinnon has been working at the Hera mine for about two years, mainly as an underground geologist and reported that Hera is an interesting deposit but about which there has been little published on the geology and nothing on the mineralogy. In the course of his lecture the speaker would try and provide some background to those features as well as some of the history and current development and mineral processing.

Copper was first discovered in the Nymagee area in the 1880s with the establishment of underground mining operations until 1917 with two smelters operating and the population growing to about 2,200. About 24,000 tons of copper was produced over that period. A number of images were shown of the workings and early town including of the Metropolitan Hotel which still stands.

The Cobar basin is mineralogically very rich with a variety of metals, - copper, gold, lead, zinc and silver. The deposits of these metals are derived, it is believed in part, from basement rocks. A feature of the deposits is that if there is a relatively small surface expression the deposit may extend to a considerable depth, workings of the CSA mine for example are now down to about two kilometers. Since they were opened up the Cobar basin deposits have collectively produced 6.4 million ounces of gold, two hundred million ounces of silver, 2.2 million tons of copper as well as large amounts of lead and zinc. In today’s monetary terms this has amounted to about forty-seven billion dollars.

The Hera mine is located five klm south-east of the historic Nymagee mine and before modern development there was nothing more than a few small pits dug by early miners into small quartz veins. The first record of the deposit being identified was in 1974. Later some drilling and further exploration was conducted in 1984 finding that there was some mineralization underground but missing the high-grade ore by twenty meters. Fifteen years later in 2001 the Pasminco company investigated further, establishing that there was significant mineralization at depth. The Aurelia Metals Company commenced full scale development of the Hera Project in 2013.

Adam McKinnon showed a number of images of diagrams of the ore-body and the mining development noting that the company had established that there was a resource of 2.5 million tonnes assaying at 3.5 grams per tonne of gold with substantial amounts of lead and zinc. Underground development was currently down to 470 meters depth and the expectation was that the workings would eventually extend to at least 610 meters. With the aid of many projected lists and impressive images of minerals the speaker moved on to describe the mineralogy of the deposit at some considerable length indicating that there was a substantial suite of minerals present in the Hera deposit, many sulphides but that the gold is present as the metal. The processing of the ore was also dealt with and illustrated in considerable detail with the speaker himself shown in one image holding a bar of the final product, a 17 kg bar of smelted gold representing about five days production having been extracted from about 5,000 tons of ore. Given that the bar contained about 70% gold with the remainder mainly silver with some lead and copper it would have been worth about \$650,000.

After the gold has been extracted from the concentrate the remaining material is a black high-grade lead-zinc-silver mixture containing about 30% zinc, 25% lead and some silver. The high-grade concentrate is taken by truck to the rail line between Cobar and Nyngan, then to Newcastle to be loaded on to a ship to be taken to China to be smelted and refined.

Adam McKinnon ended his lecture showing a number of images taken around the mine and town buildings including some of the local lizard wildlife, of the countryside and some spectacular sunsets taken over the period of his working in central NSW. After the lecture he dealt with a considerable number of questions with members also contributing comments on gold mining in NSW.

MAITLAND BAR GOLD NUGGET – AUSTRALIAN MUSEUM

If members access the site '*Maitland Bar Gold Nugget – Australian Museum*' on the Internet there is a description of the discovery and history of the specimen named for the place of discovery, Maitland Bar on the Meroo River, and the announcement that the nugget along with other specimens is going to feature in a display '**200 TREASURES OF THE AUSTRALIAN MUSEUM**' in the Westpac Long Gallery in the Museum. The Long Gallery has been undergoing a \$9 million renovation funded partially by the Westpac Bank and other donors and is to be opened in 2017. The website also includes a video showing Society member Kevin Capnerhurst, who is with the Geological Survey of NSW in Orange, explaining the history of the Maitland Bar gold specimen including that it was lost for some time in the NSW Treasury building and that the gold bullion value of the nugget containing 9 kg of gold was about US\$350,000, (when the video was made).

Quoting from the Maitland Bar Gold Nugget website - *'It was the tenth largest gold nugget ever discovered in NSW, as well as one of the purest in the world. It is the only surviving example of a large gold nugget from the early gold rush years of NSW, The nugget was displayed at a number of international exhibitions and fairs in the nineteenth century to indicate the wealth of the new colony. It was almost lost in the 1930s, before being rediscovered in a box in the Treasury – which had unwittingly been used by Treasury Officers as indoor cricket stumps – in 1956.'*

The website also provides links to a number of videos referring to metal detecting and relic hunting in outback Australia. There are a number of other sites referring to the Maitland Bar gold specimen and also to the developments at the Australian Museum.

FORTHCOMING EVENTS

SYDNEY CRYSTAL SHOW

Being held over Saturday and Sunday, the 6th & 7th of August, 9 am to 5 pm.
In Fraser Park Pavilion, 100 Marrickville Road, Sydney. 350m from Sydenham Station.

Entry \$10 adults, \$5 kids. Refreshments, free parking.

Further information from website : - www.sydneycrystalshow.com

Or : - www.facebook.com/sydneycrystalshow

Another Crystal Show will be held over the 3rd and 4th of December weekend.

BLAXLAND GEM & MINERAL CLUB GEM SHOW

Over Saturday and Sunday the 20th and 21st of August in the Glenbrook Community Hall,
Great Western Highway, Glenbrook, NSW.

(Next to Glenbrook Theatre), just west of the 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

Information from : - <http://www.freewebs.com/blaxlandgemmineralclub/BGMCshow.htm>

The CARLINGFORD GEM & MINERAL FAIR

Over Saturday and Sunday the 27th & 28th of August in the Roselea Community Centre,
645 Pennant Hills Road, Carlingford. (Between The M2 and North Rocks Road).

Entry fees are \$7 for adults and children under 18 accompanied by parents are free.

Gem, mineral, jewellery & lapidary dealers. Sales of minerals, fossils,
jewellery, rough & cut gemstones, opals, beads & supplies.

Displays of collections, cabbing, faceting and jewellery making demonstrations by the local clubs.

For more information email Peter Beckwith at peterrare@optusnet.com.au

GEMKHANA 2016

The Annual Gem & Mineral Show and Competition of Lapidaries from all over NSW
will be presented by the Gem & Lapidary Council of NSW Inc. at the Hawkesbury Showgrounds
on the Windsor Road at Clarendon, directly opposite the RAAF base, approximately mid-way
between Richmond and Windsor, turn-off on to Racecourse Road.

To be held over the Labour Day weekend, Saturday to Monday, the 1st, 2nd and 3rd of October 2016
from 10.00 am to 5.00 pm on Saturday & Sunday, and from 9.00 am to 12 noon on Monday.

Quoting from the G&LC Website:

'Sales and Displays, Demonstrations, Jewellery, Gem Faceting, Gemstones, Gem Identification.
Minerals, Gemstone Carving, Crystals, Fossils, Beads & Equipment. Local and interstate Gem,
Jewellery and Mineral Dealers. Demonstrations by experienced club members, activities
for children Raffle, Wheelchair access, Refreshments, Plenty of parking'.

As a special treat the Museum of Comparative Zoology will provide for display
a model of the fierce Albertasaurus, along with other pre-historic models.

'We hope to see a good number of tailgaters again this year but please note some changes to insurance
requirements. We cannot offer insurance at a daily rate, tailgaters now need to arrange to have their
own Public Liability Insurance. The new arrangements are described on the Council website:-

gemlapidarycouncil.org.au/gemkhana/

Further information on insurance may be obtained from the Council's brokers, -
Webster Hyde Heath at (08) 8362 5553 or www.whhib.com.au'

THE 39TH JOINT MINERALOGICAL SOCIETIES OF AUSTRALASIA SEMINAR.

From the 30th September to 4th of October 2016 with the formal proceedings being held over Saturday, Sunday and Monday the 1st to 3rd of October 2016.

Hosted by The Mineralogical Society of Queensland.
Subject: **"Mineralogy - Science and Passion"**

Venue: In the theatrette of the Queensland Museum on the corner of Grey and Melbourne Streets, South Brisbane, (Southbank).

Quote from the Queensland Mineralogical Society Inc Website:

‘The Mineralogical Society of Queensland is pleased to announce details of their 2016 seminar and invite you to attend in Brisbane, Queensland, on the Queen’s Birthday weekend, Sept-Oct 2016.

The theme is **Mineralogy - Science and Passion** - giving guest speakers leeway to speak on almost any subject that they are passionate about. We are presently finalising our program of guest speakers and this will be publicised on the website *www.mineral.org.au* and through state and affiliated societies and clubs. We are sure that the variety of topics and our presenters will have something for everyone. As well as the seminar we are conducting field trips and a microscopy session in the days before and after the formal proceedings for those who can attend.

Seminar Registration: Adult \$85 per person, student \$40 per person.
Seminar Dinner is \$50 per person.

In addition to the formal proceedings on Friday the 30th September there will be an informal Micromount session and on the Monday morning after the Seminar there will be a mineral bazaar. The venue for both the Micromount session and mineral bazaar will be the Mt Gravatt Lapidary Society Club rooms approx. 12km south-east of the Brisbane CBD. There will also be optional field trips, half a day on Monday the 3rd and the full day of Tuesday 4th October.’

The BROKEN HILL GEM & MINERAL SHOW: ‘ROCK-ON 2016’

The Broken Hill Mineral Club is presenting the 2016 ‘Rock-On’ Gem & Mineral Show over Friday to Sunday, the 30th September to 2nd of October in the Adkins Pavilion and Memorial Oval in the Broken Hill Showgrounds.

Information from the Club at P.O.Box 747, Broken Hill, NSW 2880,
from Jason McArthur on (08) 8088 7303 or mobile 0427 743 940
or from the Website: <http://brokenhillmineralclub.wikispaces.com>

EMMAVILLE GEMFEST AND SWAP MEET

Being held over the OCTOBER long weekend, Saturday 1st to Monday 3rd
in the Emmaville caravan park on Park Road, Emmaville.

Stall-holders and tailgaters in the caravan park, two full days for fossicking trips visiting sites for topaz, sapphires quartz, tourmaline, tin and copper. Lunches provided subject to booking and paying each morning.

For information and booking accommodation in the caravan park phone Donna on 02 6734 7240 or 0429 347 249.

Accommodation also available at the Tattersalls Hotel, Emmaville. Phone Rob or Dot on 02 6734 7309 or the Riley's Club Hotel, phone Barry and Dot on 02 6734 7304.

'The Emmaville Gemfest is sponsored by the Emmaville Community Centre. All proceeds go towards the upkeep of the Old Court House.'

GEM AND LAPIDARY EXHIBITION AT BEECROFT

To be held over Friday 28th to Sunday 30th October 2016 in the Beecroft Community Centre, Beecroft.

Presented by the Northern Districts Lapidary Club.

'The annual Gems, Jewellery and Minerals show and Exhibition, lapidary competition and display. Gemstones, minerals, slabs, jewellery, book stall, plant stall, some machinery, club tours, refreshments. Kid's fossicking area.'

<http://ndlapidary.org.au/gem-show-at-beecroft/>

CENTRAL COAST GEM & MINERAL FESTIVAL

Presented by the Central Coast Lapidary Club in the Mingara Club, Wyong Road, Tumbi Umbi.

Over Saturday from 9am to 5pm and Sunday 9am to 4pm on the 8th to 9th of October.

For further details please phone 02 4362 2246.

Or Festival organizer Rob Scott, - phone number 0405 904 881

GEM & MINERAL SHOW

Gem and Lapidary Exhibition Beecroft presented by the Northern Districts Lapidary Club

In the Beecroft Community Centre, on the corner of Beecroft and Copeland Roads,

Beecroft, over Friday to Sunday the 28th to 30th of October

'Gem show and exhibition, lapidary competition and display, gemstones, minerals, slabs, jewellery, book stall, plant stall, some machinery, club tours, refreshments. Kid's fossicking area.'

Further information from the website : - *<http://ndlapidary.org.au/gem-show-at-beecroft/>*

CANBERRA SPRING GEMCRAFT & MINERAL SHOW

Presented by the Canberra Lapidary Club in the Mallee Pavilion in the Epic Showground, Northbourne Avenue, Canberra, + over Saturday and Sunday the 29th & 30th of October. Entry \$5 adults, \$10

'Minerals, fossils, jewellery, rough & cut gemstones, opals, beads, lapidary equipment & supplies.

Other : Sieve for sapphires Displays of members' collections, free sessions on fossicking & gold detecting, cabbing, faceting & jewellery making demonstrations.'

Information from : - www.canberralapidary.org.au Email : canberralapidary@gmail.com
Phone: 02 6260 5322

WINDSOR GEM & MINERAL FAIR

Over Saturday and Sunday November 26th and 27th, of November at the Windsor Function Centre, Dight St, Windsor, on the corner of George & Dight Streets Windsor.

Entry fees \$7 for adults and children under 18 accompanied by parents are free.

Gem, mineral, jewellery & lapidary dealers. Minerals, fossils, jewellery, rough & cut gemstones, opals, beads & supplies. Lucky door prize as well as the club raffle held by the Hawkesbury Valley Lapidary Club. Displays of member's collections, cabbing, faceting and jewellery-making demonstrations.

For more information email Peter Beckwith at peterrare@optusnet.com.au
