



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

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

NEWSLETTER

2017 ANNUAL GENERAL MEETING

AUGUST 2017

The August Meeting is the Society ANNUAL GENERAL MEETING and will be held on Friday the 4th of August 2017 at 7.30 p.m. in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville.

The A.G.M. will present the President's report for 2016/2017, the Treasurer's report and presentation of the annual financial accounts for 2016/2017 followed by the election of the Society Committee and office-bearers for 2017/2018. 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 nomination and election. Any other business may also be raised and discussed. The minutes of the previous 2016 A.G.M. were circulated in the September 2016 Newsletter. Copies will be available at the 2017 A.G.M. or may be obtained from the Secretary.

Nomination forms for elections to the 2017/2018 Committee were circulated previously and according to the Society Constitution nominations should be received seven days before the commencement of the A.G.M. If insufficient nominations were received before the commencement of the A.G.M. they can be accepted at the Meeting.

Only financial and Honorary Life members of the Society are eligible for nomination or allowed to participate in any voting. Any members who feel able to serve on the Committee are urged to discuss this with any of the current Committee members and then to arrange for another member to propose them and provide the nomination form. A member can be nominated for but cannot hold more than one position.

After the A.G.M. has been concluded the Betty Mayne, Edna and Harold Walker Memorial Lecture will be given by Society member Lee Spencer who will speak on gemstones in Burma/Myanmar in a lecture titled : -

‘Up the Irrawaddy’.

FORTHCOMING MEETINGS AND PROGRAMS

- September 1st: Lecture on **‘Quartz Crystals from the Manuka Silver Project, Cobar District’** to be given by three speakers, Ian Graham, Angela Lay and Stephen Harris.
- October 6th: Lecture on **‘Searching for Gold in Kalimantan’** by Mark Walford.
- November 3rd: Program to be confirmed.
- December 1st : **Christmas Social and Swap n’ Sell.**

The Society does not hold General Meetings in January and the first Meeting in 2018 will be on February the 2nd. Meetings will be held on the first Friday of each subsequent month throughout the year.

February 2nd 2018: Lecture to be given on **‘Tolwong – Collecting for Mountain Goats’** by three speakers, Dieter Mylius, David Colchester and Ed Zbik

WELCOME

Welcome to new members : - Douglas Collier, Robert Sarchese and Simon Petkovski.

SALES OF MINERALS AT MEETINGS

Members are advised that there is no reason not to bring minerals for sale at any meetings throughout the year, as long as there is room to set them out, that there are not too many and sale activity would not disrupt the scheduled Meeting program. Members have occasionally brought in trays of surplus specimens to sell for about \$1 each as a donation to the Society but quality collectable specimens could also be brought in to sell with the proceeds going to the vendor. As with the auctions and Christmas sales, the Society would not impose any commission on sales. Any members with quality specimens to sell, as well as those \$1 box specimens, are asked to limit themselves to one tray per meeting and if too many members bring in trays and there is insufficient room to lay them out they should put them away to bring to a subsequent meeting. Please clearly identify your specimens and/or trays with your name.

SOCIETY GENERAL MEETING STARTING TIME

Suggestions have been made to change the starting time if not the day of the Society monthly General Meetings. This would be a major break with tradition, the Society meetings have been held on the first Friday of eleven months of each year for over forty years. However Sydney traffic density, particularly on a Friday evening has become very heavy and is not likely to improve in the short term. Accordingly it has been suggested to either start the Meeting a little later at 8.00 pm or even hold it on the immediately following Saturday evening. Comments, further suggestions and discussion from members are invited.

A Report from the Past on the First Year of the Society's Activities

Ed Zbik has found a report originally published in the **Australian Mineralogist magazine**, No 7, December/January 1977, written by Dr Bill Birch AM, reviewing the first year of the Society's activities.

Dr Birch is now retired but was for many years Senior Curator in Geosciences at the Museum of Victoria becoming Curator Emeritus. During his tenure at the Museum he has published over 200 papers and articles and due to his collecting activities the Museum mineral and rock collection has more than doubled in size and scope. Dr Birch has also long been a member and is now patron of the Mineralogical Society of Victoria which was inaugurated in March 1976, some ten months after the NSW Society in May 1975.

The report following notes that October, (writing the report in 1976), was the first anniversary of the official Society meetings, being held for the first year at Gemmology House in Wentworth Avenue, central Sydney, commencing in October 1975. After the end of 1976 meetings were held at the Australian Museum for the next fifteen years. The practice by the Society of holding meetings on the first Friday of eleven months of every year was established in October 1975 and has been continued without break ever since.

Dr. Bill Birch



THE MINERALOGICAL SOCIETY OF NEW SOUTH WALES

Notes on the Activities of The Society

As these are the first Society notes to appear in *The Australian Mineralogist* and in view of the fact that the October meeting of the Society marked the first anniversary of its official meetings at Gemmology House, Sydney, a brief resume of the Society's activities during the past twelve months would seem appropriate.

The Society got off to a good start with an exhibition of minerals at the Bankstown and Districts Lapidary Club's Annual Exhibition in September, 1975, followed by an illustrated lecture entitled 'Classic Localities — Past and Present' delivered by prominent Sydney collector, Albert Chapman at the Society's inaugural meeting in October, 1975.

Members have been treated to a host of interesting, entertaining and informative talks during the past year including 'The History of Broken Hill' (Mrs. Kay Koenig, Geological and Mining Museum, Sydney), 'Geology and Mineralogy of Metamorphic Rocks' (Mr. George Katchan, Sydney University), 'X-Rays, Neutrons and Crystals' (Professor J. McConnell, University of New South Wales), 'Australian Mineral Collecting Areas' (Mr. Oliver Chalmers, Australian Museum, Sydney), and 'Australian and Overseas Mineral Collecting Areas' (another talk by Albert Chapman). In addition, a number of interesting films on geological topics have been screened. The last (October) meeting featured slides of the famous Tucson Show and U.S. trip with commentary by John Woolfe. Space does not permit the summarising of individual talks: these may be read in the Society's Newsletter.

Page 31

INVITATION TO THE GEOSURVEY DRILLCORE LIBRARY

The Geological Survey of NSW, Department of Planning & Environment has distributed the following invitation to an Open Day - *'Join our scientists and technicians for a free tour of the NSW Government's warehouse of drillcore, rocks, fossils and minerals'*.

The tour is planned for Thursday, 17 August 2017 from 10:30 am to 2:00 pm in the **WB Clarke Geoscience Centre**, 947-953 Londonderry Road, Londonderry, NSW 2753. Further information may be obtained on the Website : 'STORIES IN STONE - THE NSW LIBRARY OF ROCKS'. Visitors must book tickets online to attend a tour. E-mail to : - <https://www.eventbrite.com.au/e/stories-in-stone-the-nsw-library-of-rocks-tickets-35164756734>

STORIES IN STONE - THE NSW LIBRARY OF ROCKS

'You're invited to Stories in Stone - the NSW Library of Rocks – on the 17th of August. For those who have never been to the GeoSurvey's drillcore library, this event is a good opportunity to see the large and unusual building.

Join our scientists and technicians for a series of hands-on activities at the NSW Government's warehouse of rocks, fossils and minerals.

In operation since 1964, this specially designed building holds over a million metres of drilled rock that records what lies beneath the surface of NSW. This library of drillcore is available for all to 'read' and interpret, and you'll see how high-tech equipment at the centre can help to identify what minerals are in the rock.

See spectacular and unique mineral and rock specimens from around NSW and the globe and marvel at their beauty under the microscope.

Palaeontologists will lead you through the amazing fossil record of past inhabitants of NSW – stretching back over 500 million years.

Anyone with an interest in Earth's treasures is invited to attend!

SEMINAR DATE CORRECTION

In the reports on field trips in the July Newsletter there was a note on the forthcoming 40th Joint Mineralogical Societies of Australasia Annual Seminar which gave incorrect dates for the event as taking place in November. The Seminar will be held in October. Corrected panel following.

Annual Mineralogical Societies of Australia Conference – “South Australia – Copper State”

1-3 rd	October	– Pre conference field trips, based at Hahndorf,
4-5 th	October	– Annual Mineralogical Societies of Australia Seminar lecture program.
6-8 th	October	– Post conference, field trips, micro conference, Gem & Mineral Show.
9-14 th	October	– Field trips ending at Broken Hill.

The JULY MEETING

The Meeting was opened by the Vice-President, John Chapman, who asked members to consider the suggestion of scheduling the starting time for the Society meetings later to 8.00 pm given the increasing problems of negotiating Sydney traffic to arrive for 7.30 pm. The suggestion would be raised at a subsequent meeting inviting comments and discussion from members.

Ed Zbik reported on a number of **Field Trips** being planned. There were also a number of photographs laid out which had been taken during the recent visit to the Tallawang mine showing some views of the workings and a number of the minerals found.

The visit to the ANSTO mineral processing facility at Lucas Heights was scheduled for the 18th or 19th of July, subject to confirmation. Another visit to Lowes Mt was being planned for the 29th/30th of July, then visits to Muttama in September and sites in the Barrington Tops for November. Ed Zbik particularly reminded members that activities during the forthcoming **Mineralogical Seminar in South** Australia in October were intended to include a number of field trips to sites initially near to Adelaide, then moving further afield and finishing at Broken Hill.

There was also the forthcoming Open Day on Thursday the 17th of August being held at the W.B.Clarke Geoscience Centre of the **Geosurvey Drillcore Library** in Londonderry. Members interested in visiting the Centre would need to book up through the Eventbrite website. Another forthcoming event which Ed Zbik brought to member's attention was the Australia, (Asia-Pacific's) International Mining Exhibition, (**AIMEX**) being held at the Sydney Showground, (Olympic Park), over the 29th and 30th of August. Visitors would need to register through the AIMEX website to attend.

Graham Ogle reported that this month's **Micro-Mineral Group** meeting was being held at his house on the following Saturday at 1.00 pm. The theme would be on 'Minerals of NSW'. Any members were welcome to attend although should advise him in advance that they wished to do so. Graham Ogle also described a visit he had made recently to the **Sterling Hill mine** in New Jersey, U.S.A., notable, along with the nearby Franklin mine, for the suite of highly fluorescent minerals found there. The site is about an hour from New York and was well set up to receive and impress visitors with a substantial mineral and mining museum on site and collecting allowed on the dumps.

Jim Sharpe addressed the meeting to commend to members the **Australian Journal of Mineralogy** which was now being published in West Australia. The first issue from the new publishing team in WA had been distributed to subscribers over the previous month and he showed the meeting a copy of the new issue which clearly maintained the previously-established high quality of the publication. The current issue carried several articles from WA and South Australia including a description of the history of the discovery and development of the huge Kalgoorlie gold deposit and the suite of minerals found there including an array of tellurides. The presence of telluride in the deposit had given the miners some gold extraction problems for a time since due to their unfamiliarity with those minerals they had been mistaking them for pyrite and discarding them when they were actually substantially gold-bearing. Some of the blocks of telluride-containing ore which were eventually found to assay at more than 500 oz of gold per ton had been used to build a hearth and chimney in a miner's hut !

‘Micrometeorites’

David Colchester

A large amount of meteoritic material estimated to be from 10 to 30 thousand tonnes enters the Earth’s atmosphere each year with most of it burning up completely before reaching the surface. Approximately 4,000 tonnes of the material or less than 10% is estimated to actually reach the ground. Most of this is in the form of micrometeorites which are small approximately spherical smooth grains of between 0.5 to 2mm in size and amounts of these can be found in many places on the surface, more so in relatively undisturbed locations. Whilst micrometeorites when arriving at the Earth’s atmosphere would be travelling at a very high speed, due to their small mass they have very little momentum and would be slowed down much more quickly than larger meteorites so do not burn up as readily and basically ‘rain down’.

David Colchester had first been alerted to the presence of micrometeorites in common locations when he had occasion to examine the source of sludge in swimming pool filters. Among much other material were a few spherical beads which he found were magnetic and gave x-ray diffraction patterns and chemical reactions for iron and some nickel. Another discovery of micrometeorites has been made by scientists in the American base at the South Pole when in gathering ice from a borehole to melt for water use they found a small amount of sludge at the bottom of the melting vessels. Since the South Pole is about as far as one can get on the planet away from sources of atmospheric pollution the sludge was examined and the conclusion was that it was mostly meteoritic dust.

A number of images were shown of samples of micrometeorites, all showing a smoothed outer surface and indications of having been heated to a high temperature. There were a number of different types based on their chemical composition, internal structure and appearance in thin section and referring to the images the speaker pointed out the differences. The types included iron-nickel, silica-rich, carbonaceous, fine and coarse-grained and scoriaceous, (coarse, vesicular).

Micrometeorites have attracted the attention of collectors and David Colchester referred to a book ‘In Search of Stardust’ by Jon Larsen, (published by Voyageur Press Inc), which provides a detailed and well-illustrated presentation of the subject. A number of images from the book were projected. The speaker then suggested means by which micrometeorites could be collected. This could be done with a powerful neodymium magnet covered with a cloth then passed over a layer of sediment collected from anyone’s house guttering! The material collected on the cloth would be examined with a microscope for characteristic smooth black spherules.

In conclusion David Colchester advised that he had spoken to Ross Pogson at the Australian Museum who had looked through the Museum collection of meteorites and had found a few micro-tektites which had been collected from a drill-core in the Indian Ocean south-west of Perth. A few examples had been brought in for display and the speaker would set up his microscope later to show members the specimens.

‘The Origin of the Metamorphic Stones of Stonehenge’

Professor Peter A. Williams

Professor Williams has visited Stonehenge in the U.K. several times although on his last visit had found that visitors were restricted to a limited area of the site and not allowed to touch the stones. With the aid of projected images he indicated the location of the site, alongside the A303 east-west road, on Salisbury Plain towards the south coast of England, about twelve kilometers north of Salisbury.

The speaker particularly stressed that apart from Stonehenge itself there were many other sites of ancient and prehistoric interest all over that part of England. Notably he referred to the village of Avebury about 30 klm to the north which is surrounded by a henge, a ring of large stones although not with capstones. Stonehenge has long fascinated many people having been built during the Neolithic, (New Stone Age) period, possibly up to 5,000 years ago. Peter Williams did not know much about the religious or astronomical observations which were made by the builders of the site but the origin of the stones has caught people's imagination for a long time.

The largest stones at Stonehenge are of silicified sandstone, (called sarsen sandstone), and these form the trilithons, the uprights and capstones with the largest weighing up to twenty-five tonnes. Sarsen sandstone blocks were found over much of southern England having been left behind after glacial action and the sarsen stones at Stonehenge were collected from within about twenty kilometers to the north of the site. The origin of other stones however has caused a considerable amount of speculation and research. There is a block called the Altar Stone which is a different type of sandstone and may have been brought from the Senni Beds in the Brecon Beacons of southern Wales, about forty kilometers north of Cardiff.

Then there are the bluestone blocks, forty-three of them documented so far, which have been shown to be from ancient quarries in the Preseli Mountains in north Pembrokeshire in west Wales. The bluestones are smaller than the sarsen blocks but still weigh between two and four tons each and were used to form an inner ring inside the ring of sarsens. They are a blueish dolerite which is an intermediate igneous rock, 'intermediate' referring to the silica content.

Peter Williams then spent some time describing what has been discovered about the prehistoric quarrying at a large number of sites in the Preseli Mountains, working having proceeded at one quarry for a period before being abandoned for a time and later started at another site. Excavations in the area had established human occupation going back to over 10,000 years with quarrying having been conducted between 6,000 and 4,000 years ago. It was apparent that the Preseli bluestone was a valued material with evidence that it had been transported over much of Wales even into the Isle of Anglesey. The research had identified a number of quarrying sites and established not only which ancient quarry the Stonehenge bluestones had come from but also when they were quarried. Unfortunately the archeological research has not indicated how the bluestones were moved a distance of some 250 klm from the Preseli site to Stonehenge although wooden rollers and ropes were probably a major feature of the work.

To lead up to a whimsical inquiry he had received about transporting the bluestones Peter Williams described some aspects of unit cell crystallography leading him to speculate on formulating a copper, rare-earth, barium oxide compound which would have super-conductor properties at liquid nitrogen temperatures. This was a material which workers have been chasing for a long time and is an important area of research. He then related how he had been working in his office at the University of Cardiff some years ago when he received a telephone call from an inquirer who wanted to speak to an inorganic chemist about superconductors and asked if the speaker knew about research on superconducting materials to which the answer was Yes, Professor Williams having incorporated such information into some of his lectures to students. The caller then asked if it were possible that the ancients would have known about super-conducting materials and had been able to use them to levitate blocks of bluestone to transport them from Wales to Stonehenge !. A true conversation Peter Williams insisted, which he terminated quickly at that point.

No doubt the person inquiring about moving the bluestones had not taken into account that at the present level of research, super-conducting compounds will only function at liquid helium temperatures. This substance would not have been available to the otherwise industrious Welshmen quarrying in the Preseli Mountains some four to six thousand years ago !

In conclusion Peter Williams acknowledged that whilst researchers were not sure how the Stonehenge bluestones were moved to their present site he was quite sure where they had come from. The precise location of the quarry among a large number of others in the Preseli Mountains had been identified including an amount of the block trimmings still onsite.

FORTHCOMING EVENTS

PARRAMATTA & HOLROYD LAPIDARY CLUB 57th ANNUAL EXHIBITION

Theme: "India and the Sub- continent"

To be held over Friday to Sunday, the 18th, 19th & 20th of August, from 9am to 4pm each day.
At the Clubrooms at 73 Fullagar Rd, Wentworthville, Sydney, NSW. Entry is free.

Demonstrations of Club activities; Rocks & minerals for sale; Members work for sale;
Plant sales; Activities for the kids. Refreshments - Sausage sizzle, Devonshire teas.

BLAXLAND GEM & MINERAL CLUB SHOW

Being held over Saturday and Sunday, August the 19th and 20th in the
Glenbrook Community Hall, Great Western Highway, Glenbrook, NSW.
(Next to Glenbrook Theatre), just west of the Information Centre.

From 8 am to 4 pm daily. Entry: Adults: \$3 Children \$1

Displays of lapidary work and gem, mineral and crystal sales.

Refreshments available.

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

The CARLINGFORD GEM and MINERAL FAIR

Being held in the Roselea Community Centre, 645 Pennant Hills Road, Carlingford, over Saturday &
Sunday the 26th and 27th of August. Saturday from 9.30 am to 5 pm, Sunday from 9.30 am to 4 pm.

Sales and displays of jewellery, gemstones, beads, opals, gem rough, carvings,
fossils and mineral specimens, and crystals from all over the World.

Admission fee \$7. Refreshments available.

Inquiries to Peter Beckwith on Mobile 0412 233 150

THE 40th JOINT MINERALOGICAL SOCIETIES OF AUSTRALASIA ANNUAL SEMINAR

The 2017 40th Seminar will be held in the Hahndorf Tourist Park & Lakeview Conference Centre at Hahndorf, near Adelaide, S.A. over Wednesday to Friday the 4th to 6th of October and is being hosted this year by the **Mineralogical Society of South Australia**.

The Theme will be '**Copper Minerals - Copper State**'

The entire seminar will run from Saturday the 30th of September to Friday the 6th of October.

There are a number of field collecting excursions arranged for participants before and after the seminar, as well as the Adelaide Gem & Mineral Show and other activities.

The formal proceedings, opening address and lecture program will take place over the two days of Wednesday the 4th and Thursday the 5th of October with various activities including field trips scheduled from October 1st through to the 6th. Additional field trips are planned for the 9th – 14th October to the north of S.A, and to locations and collections in and around Broken Hill.

The Seminar will be based in the historic German settled village of Hahndorf, only 30 minutes' drive by car from Adelaide City. A range of accommodation options are available including at the seminar venue. The theme of 'Copper Minerals - Copper State' has been selected in view of South Australia's early copper mining history. A number of field trips to copper, uranium and phosphate deposits are currently being planned. There are a number of tourist-interest places to visit in the region including dozens of wineries.'

Contact: President: Harold Gallasch
Phone: (08) 8388 7218
email: gallasch@bukartilla.com.au

Secretary: Chris Phillips
GPO Box 1089 Adelaide 5001
secretaryminsoc@gmail.com

GEMKHANA 2017

The Gemkhana will be held again this year in the Hawkesbury Showgrounds at Clarendon near Richmond over Saturday to Monday, the 30th of September and the 1st and 2nd of October from 10.00 am to 5.00 pm on Saturday & Sunday, and from 9.00 am to 12 noon on Monday.

The Gemkhana is presented by the Gem & Lapidary Council of NSW Inc. and is the Annual Gem & Mineral Show and Competition of Lapidaries from all over NSW. Since the venue last year was very successful and geographically convenient to Sydney the Gemkhana is being held again in the Hawkesbury District Showgrounds, at Clarendon. The Showgrounds are directly opposite the RAAF base, on the Windsor Road approximately mid-way between Richmond and Windsor, turn-off on to Racecourse Road. There is unlimited parking in and just outside the Showgrounds which are a fairly short walk from Clarendon railway station.

'Featuring Competition, Exhibitions, Dealers, Demonstrations and Tailgating; Sales of minerals, fossils, jewellery, lapidary equipment, faceting rough stones and slabs, silver work and gem cutting activities.'

ILLAWARRA LAPIDARY CLUB INC

2017 JEWELLERY GEMS AND MINERALS FESTIVAL

Sat 4 Nov, 9am – 4pm and Sun 5 Nov, 9am to 2.30pm

At Heininger Hall, Ribbonwood Centre, 109 Princes Hwy, Dapto

Entry: Adults \$3, children under 12 years free

Featuring: Gemstone Faceting, Cabachon Cutting, Silvercrafts, Jewellery Making and Valuations, Mineral Group, Club and Fossicking Information, Refreshments, Raffle and Kid's Games.

Dealers Selling: Lapidary Supplies, Minerals, Jewellery, Crystals, Findings, Fossils. Beads and Opals.

Enquiries: Lynne 0428310697

<http://www.illawarralapidaryclub.com.au/>

The **NEWCASTLE LAPIDARY CLUB** is holding their annual

GEM and JEWELLERY FAIR

Over Saturday 11th (9am – 4pm) and Sunday 12th (9am – 3pm) of November at the Newcastle Basketball Stadium, 27 Young Road, Broadmeadow, Newcastle.

'There will be demonstrations of jewellery making, faceting , as well as many stalls selling a variety of tools, jewellery, craft and gems and minerals. This is new venue with more stalls, in an indoor, spacious well-lit location with plenty of all weather parking. . Parking and Entry are free and there will be canteen facilities available throughout each day.'

Inquiries to Jeff Lewin on Ph (02) 4952 9611, Fax (02) 4952 8057 or email newlap@gmail.com
