



THE MINERALOGICAL SOCIETY OF NEW SOUTH WALES INC

Website: www.minsocnsw.org.au

Please address all correspondence to :-
The Secretary, 58 Amazon Road, Seven Hills, NSW 2147

NEWSLETTER SEPTEMBER 2022

The September Meeting will be held in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville, on Friday the 2nd of September at 7.30 pm.

All members attending the meeting should be double or further vaccinated. Masks can be worn but are optional and social distancing should be maintained. Everyone should sign the Attendance Register and anyone who feels unwell or has had recent contact with an infected person should not attend the Meeting.

There will be a lecture to be given by Trevor Dart on 'Recent finds in the Broken Hill District'. Since the speaker will actually be in Broken Hill he will give the lecture by Zoom although the Meeting will otherwise be 'live' at the Lapidary Club.

FORTHCOMING MEETINGS and PROGRAMS

October 7th : There will be a lecture to be given by Noel Kennon on : -
'Colour and the Colour of Minerals'.

November 4th: Lee Spencer will give a lecture on the Emperor Gold Mines.
There will also be a Kids with Cancer sale held during the evening

The projected **Kids with Cancer** sale has been moved to November to give members more notice to find specimens to donate. Members are invited to look through their collections and select specimens to donate for the sale. All proceeds will be sent to the Kids with Cancer foundation. Members are asked to advise in advance of the sale what specimens they will donate so that a list can be circulated to members although more specimens could be brought in on the evening.

Specimens should be provided with the name, location if known, and the donor's sale price.

December 2nd or Saturday 3rd: Christmas Swap And Sell.

Holding the Christmas Social and Swap and Sell during the day on Saturday the 3rd instead of Friday evening the 2nd of December is being considered. Last year due to the residual virus considerations the Social was held on Saturday and members may have found this more convenient.

Minutes of the ANNUAL GENERAL MEETING Friday 5th of August 2022

The 2022 Annual General Meeting was opened by the Vice-President, John Chapman. The Society President, Dieter Mylius, was attending by virtual mode but not in person since he had acquired a positive virus PCR test. The Vice-President noted that the A.G.M. required a quorum of at least fifteen members and that there were a total of about thirty attending. There were about twenty members present and another dozen connected by virtual mode.

Graham Ogle reported that the next **Micromount meeting** would be held on Sunday the 14th of August at John Chapman's house and the Group would be looking at minerals from the Sydney Basin which encompassed the area from the Hunter Valley down to Wollongong and Dapto and also west to Yerranderie.

Mark Walters reported on developments and arrangements for forthcoming **Field Trips**. Notably there would be one or more Trips to the Paddy's River area for which Ed Zbik had obtained a licence good for one year. The licence limited groups to twelve and for the projected trip over the 19th to 22nd August there were already seven applicants. Mark and Dennis O'Brien would also be making a trip over the weekend after the Meeting to Mt Tennyson to check out the area with the view to organising more trips to that site.

Referring to the lecture 'Iridescence – Now and Then' that he gave to the July Meeting John Chapman pointed out that Geoff Parsons had brought in some large specimens of goethite from Mt Morgan in Queensland which displayed marked iridescence.

With no more announcements to be made the Vice-President read out the President's Report.

President's Report 2022

Another extraordinary year.

Another year of Covid affecting our activities and on top of that, months of extraordinarily wet weather, followed by freezing cold conditions. And as I understand it, the elements are not done with us yet.

But it has been a year where we, as they say, soldiered on.

While we lost a few members over the last three years, but also gained some new members, so our numbers have stabilised at around 100, and at meetings we mostly seem to have between 40 and 50, split between being here in person and others on Zoom. I thank you all who are still with us and also of course those who choose to drop in.

During this last year, in one way or another, most of the things we did pre Covid we still did and still offer, albeit with reduced frequency and scale.

* The Friday night meetings go on, and we have had some absolutely fantastic talks over the last year. Zoom has been a blessing for those of us that are not comfortable with meeting in person, or those finding it a challenge to get to and from Wentworthville, especially at night. One day we will get really good at doing the whole Zoom thing so it will all be more seamless and slick. We just need more practice.

* The yearly auction happened and it was very successful, enthusiastically run by Glenn Brown, with some great results for buyers and sellers.

- * The Christmas gathering happened in a different format being an indoor outdoor event, with many people using the event to catch up with fellow members.
- * The micro group, ably convened by Graham Ogle is still meeting, basically on a monthly basis in people's homes or here at the club, depending on how numbers are going.
- * Field trips have struggled a little, but did include a very successful trip to Wonawinta or Manuka led by our new field trips officer, Mark Walters, who has jumped into this role with enthusiasm, as well as looking after the Safe Work Methods Certificate program. Reccé trips are happening to scope out potential places to visit, when not thwarted by foul weather.
- * The library is still there and publications are available if you want to borrow them.
- * Financially, the society is in great shape. Subs keep dribbling in, and our expenses are very low. Graham will give you more details in a little while.
- * Our new website, while live and being used, still needs some more work, and training of people to keep it up to date, which will hopefully see some progress during the following year.

While we had hoped to run the 2021 "43 Shades of Silver" seminar, itself a postponement of the 2020 seminar, reality kicked in, and it had to be a virtual event on Zoom. Numbers were down on the previous seminar as it appeared the novelty of a Zoom event lessened, but all in all, I think the event was successful and well received. The 44th Annual Seminar of the Joint Mineralogical Societies of Australasia, titled "Zeolites" will on October 29 and 30, and be zoomed from Dargaville in Northland, New Zealand.

Even though I am obviously part of it, I think the society has an excellent committee to guide and manage it. As I have mentioned in previous years, the committee is a fairly cohesive bunch of like-minded people, with few disagreements, largely held together by our fantastic Secretary, George Laking. We meet one evening a month on zoom, and even though he is no longer on the committee, Ed Zbik threatened to and does join us in most meetings. So John, Graham, George, David, Peter, Haley, Geoff and Mark, thank you to you all for the great work you are doing.

In case you had not noticed, the faces of the committee members are all getting older, so we again ask for some new blood and new ideas. We may have to start tapping people on the shoulder. And if you think it would be daunting to join the group that is rusted in place, you are most welcome to listen in before committing. Ask Graham Ogle for the link.

So, to finish, thank you all, for still being with us. It's great to see your faces on the first Friday of the month, both in 2D or 3D. Thank you for your support and encouragement throughout the year.

I wish the incoming committee a successful year, with the challenges it will no doubt throw it its path.

Thank you,

Dieter Mylius, President, Mineralogical Society of NSW.

The next Order of Business was for the Society Treasurer, Graham Ogle to present the **Annual Financial Report**. Copies were handed around to the members and Graham Ogle proceeded to explain the figures. The Report showed the records for the financial year ended on 30th June last and for comparison the figures for the immediately preceding year.

The overall figures shows that the total funds held by the Society were \$109,939.51 which was an increase of \$1,523.45 over the 2020/2021 financial year.

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

FINANCIAL STATEMENT 2021-2022

		2021-22	2020-21
<u>Funds in hand:</u>	Balance in Operating Account CBA # 06 2016 28023647 @ 30th June 2022	\$ 8,662.14	\$ 8,468.05
	Funds in CBA Term Deposit 1 – Betty Mayne Bequest	\$31,966.32	\$ 31,966.32
	Funds in CBA Term Deposit 2 – Walker Bequest	\$69,265.05	\$ 69,055.69
	Cash in Hand	\$ 46.00	\$ 46.00
<u>Liabilities:</u>	Kids with Cancer Foundation	0	\$ 1,120.00
<u>Total Funds at 30th June</u>		\$109,939.51	\$108,416.06
<u>Increase in funds</u>		\$ 1,523.45	\$ 570.30
<u>Income:</u>	Membership subscriptions	\$ 2,375.00	\$ 2,155.00
	Supper donations and mineral sales	\$ 175.50	\$ -----
	Sale for Kids with Cancer		\$ 1,120.00
	George Smith /Gemstones NE book sales + others	\$ 131.95	\$ 398.30
	Donation		\$ 200.00
	Interest on operating account	\$ 34.66	\$ 31.23
	Seminar	\$ 800.00	\$ 196.00
	Interest on term deposit (into operating account)	\$ 159.83	\$ 737.24
	Interest on term deposit (reinvested into term deposit)	\$ 209.36	\$ 709.65
	Total	\$ 3,886.30	\$ 5,547.42
<u>Expenditure:</u>	Supper items	\$ 59.21	\$ 197.96
	Rent - hall hire		\$ -----
	Seminar	\$ 374.97	
	Transfer of money raised for Kids for Cancer	\$ 1,120.00	\$ -----
	Printing, postage, stationery, Subs, PL ins., Dept Fair Trading, PAI, Speaker, Website, Library, Equipment etc.	\$ 1,928.67	\$ 3,659.16
		Total	\$ 3,482.85

<u>Income -</u>			
<u>Expenditure:</u>		\$ 403.45	\$ 1,690.30

Other assets: Mineral trimmer
 UV lamp, Geiger counter
 Microscopes
 Library and shelving
 George Smith books (2)
 UHF radios (2)
 Projector, PA system
 Urn

The above statement indicates that the Society is in a sound financial position

Graham Ogle

Treasurer

3rd August, 2022

The Society maintained three accounts, two term deposits and one current account to deal with month to month expenses. The interest from the Betty Mayne term deposit was added to the current account so the capital amount remained unchanged whilst interest accrued by the Walker deposit was added to the capital at each maturation date. The balance in the operating account was similar at the end of the 2021/2022 financial year to the balance at the end of the previous year.

Membership subscriptions showed a slight increase over the previous year which was encouraging after numbers had fallen over 2020/2021, no doubt due to the pandemic restrictions. Otherwise there had been small amounts of income from book sales and refreshment donations. A sum had been refunded by the Ryde-Eastwood Club after the Seminar which it had been hoped to be held there was cancelled.

Expenditures included insurance premiums, website maintenance fees, Seminar and refreshment expenses. There were also a number of equipment assets listed including the Society Library, microscopes, projector, P.A. system, mineral trimmer, Geiger counter, UHF radios, U.V. lamp and boiling water urn.

Overall the Treasurer advised that the Society was in in a strong and stable financial position. There were no questions asked by members about the Financial Report and Graham Ogle asked for it to be proposed and accepted by the Meeting since a statement had to be sent to the Department of Fair Trading within a month of the A.G.M. John Chapman proposed that the Report be accepted, the proposal was seconded by Geoff Parsons and carried.

Presentation:

At this point in the proceedings John Chapman advised that he would divert briefly from the Order of Business to display to the Meeting a copy of the book *“Making it Mine – Sir Arthur Russell and his Mineral Collection”*. The book has over 400 pages of detailed text and over 750 illustrations and a list of numerous contributors including Society Life member Professor Peter A. Williams.

At the suggestion of Ed Zbik who had obtained a copy of the book for the Library the Committee had decided to purchase an extra copy and to make it a gift to Peter Williams, who was now retired, in appreciation of his long association with the Society. Professor Williams was asked to come forward to accept the book.

ELECTION OF THE SOCIETY COMMITTEE FOR 2022/2023

The next Order of Business was the election of the Society Committee for the forthcoming year. All the Committee positions were open and John Chapman asked Glenn Brown to come forward and take on the task of Returning Officer to conduct the election.

The Returning Officer noted that up to the commencement of the A.G.M. there had been only one nomination received for each Committee position and that in fact all the previously incumbent members were the only nominees. Accordingly he was able to dispense with any balloting and declare the nominees duly elected as follows -

PRESIDENT:	Dieter Mylius
VICE-PRESIDENT:	John Chapman
SECRETARY:	George Laking
TREASURER:	Graham Ogle
COMMITTEE MEMBERS:	Haley Bambridge
	Peter Beddow
	David Colchester
	Geoff Parsons
	Mark Walters

With the Election concluded the re-elected Vice-President advised that the 2022 Annual General Meeting had been completed and would be closed.

In introducing the guest speaker for the evening John Chapman first described the reasons for holding a keynote presentation for the year entitled the **Mayne-Walkers Memorial Lecture**. The Memorial lecture is given each year after the A.G.M. in acknowledgment of three Society members and major benefactors to the Society, the late Betty Mayne and brother and sister Harold and Edna Walker. In appreciation of the benefactors the Memorial Lectures were established at the suggestion of the late Professor Laurie Lawrence and have been held every year since then. John Chapman noted that the Society was in such a good financial position due to the generosity of the three members who had made bequests in their wills to the Society.

Betty Mayne was a nursing sister and became a Society member during the 1980s joining the Committee first as Secretary and then President and organised the 1991 Mineralogical Seminar held that year in Sydney. Sadly she passed away abruptly only a short time after the Seminar was held. She had a strong interest in mineralogy and had built up a fine collection. Her will stipulated that her collection should be sold with half of the proceeds given to the Society. The bequest was used to set up a term deposit, kept separate from the operating account, with interest allowed to accumulate but occasional sums used for commemorative purposes whenever the Committee deemed suitable.

The two other benefactors were brother and sister Harold and Edna Walker who were loyal members of the Society up to the early 2000s. In spite of being in poor health they made a point of attending virtually all meetings and even field trips. They both passed away within about a year of one another in 2011/2012 and Edna's will provided a further bequest to the Society. Accordingly it was fitting that the Society honour the additional benefactors by extending the title of the Memorial Lectures to include their names.

The Vice-President then introduced the guest speaker for the evening. The Society was honoured to welcome Professor Ken McQueen to the Meeting. He is Adjunct Professor of Geochemistry and Landscape Evolution at the University of Canberra and a highly-regarded academic who has performed a great deal of work in New South Wales. He is also an Associate Professor with the CRC LEME, (Cooperative Research Council; Landscape Evolution and Mineral Exploration) at the University. Professor McQueen was also a good friend to the Society having given several lectures to meetings in the past.

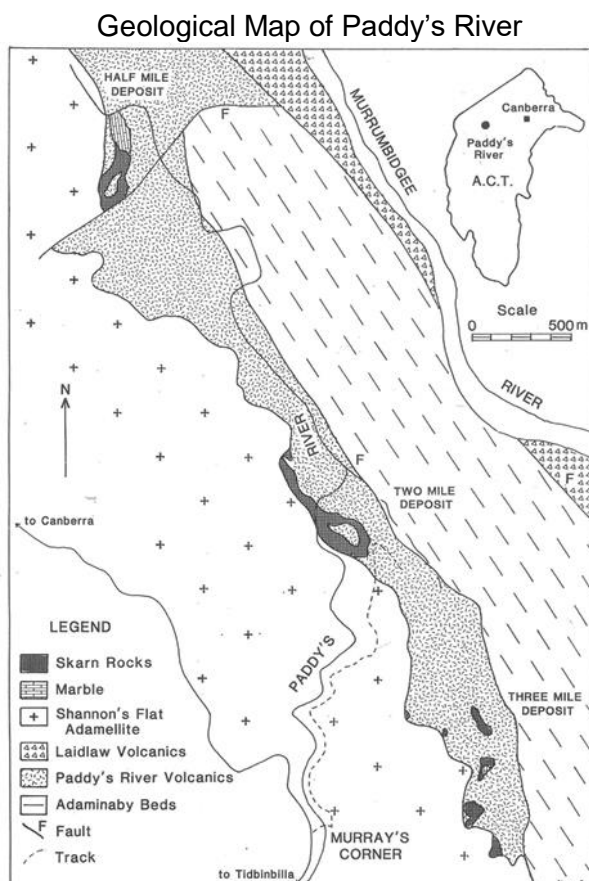
“The Paddy’s River Skarns, ACT: Their Origin and Mineralogy”

Professor Ken McQueen

Professor McQueen commenced his lecture by noting that the previous one he had given to the Society was two and a half years ago, just before all the pandemic restrictions were imposed and which were now, after that period, hopefully ended. He compared that time to the other serious pandemic of 1919/1920 which had also lasted about three years. So possibly his talk this evening would definitely mark the end of the pandemic.

The speaker further noted that John Chapman had invited him to give the lecture on the Paddy’s River Skarns to the Society possibly because last year he had published an article in the A.J.M., (No 1. Vol 22, June 2021), on the area, (*Skarn deposits and associated minerals of the Paddy’s river Valley, A.C.T.*). He also noted that the Society would be conducting a field trip to the area within the month and hoped that his lecture this evening would provide an introduction to the features and minerals which the members would find.

The following notes, maps and images were provided by the speaker, displayed and explained by him throughout his lecture.



Three separate areas of skarn mineralisation developed in the Mid-Silurian, Paddy's River Volcanics at the contact with the Shannons Flat Granodiorite (Adamellite).

- Half Mile Deposit
- Two Mile Deposit
- Three Mile Deposit

University interest in the skarn mineralogy:

The Half Mile skarn deposit and surrounds were used for many years as a first year geology field trip site by the University of Canberra.

Old workings, gossan and massive magnetite.

Nearby limestone and caves.

Mapping contacts between the skarn, granite, volcanics and limestone.

Some unusual minerals were noticed on the old dumps and further investigation led to the documentation of over 90 different primary and secondary mineral species at the site.

History of discovery and mining:

- The Paddy's River skarns were probably known prior to the 1870s.
- 1895 – The first record of mining. Thomas Coyle produced 2.5 t of copper and 26.1 kg of silver from 61 t of ore at the Half Mile deposit.
- 1897 - Copper prospecting by a Melbourne-based syndicate, but no record of production.
- 1901 - Jaquet described the Two Mile deposit in a report on the iron ore deposits of NSW, estimating >1 million tonnes of magnetite.
- 1907-1910 - Cowley Copper Syndicate Ltd extensively tested the Half Mile deposit.
- Under P.E. Marmion of Queanbeyan extended the existing adit (No. 1) and dug No. 2 and 3 adits and connecting winzes and crosscuts. The deposit proved uneconomic.
- 1946 - Broken Hill South Ltd applied for a lease over the Half Mile deposit mapped and sampled by the BMR with detailed sampling along No 2 adit. No mining resulted.
- 1951 - Half Mile deposit inspected by Lake George Mines Pty Ltd for potential treatment at Captains Flat. Not followed up due to difficulty in obtaining authority for prospecting.
- 1950s - Deposits investigated by NSW Joint Coal Board for potential mining of magnetite for coal washing. Magnetite sampled and tested for iron and silica content by the BMR.

Comparison of features of the three skarn deposits

Skarn Deposit	Predominant Host Rocks	Predominant Outer Skarn	Predominant Inner Skarn	Ore elements
Half Mile	fine-grained dacitic tuff, limestone.	hedenbergite, chlorite-epidote, tremolite/actinolite.	magnetite, andradite, grossular epidote-quartz vns	Fe, Pb, Zn, Cu, Bi, Ag, Au
Two Mile	coarse dacitic dacitic tuff, black shale ±limestone.	epidote, hornblende, actinolite, chlorite, andradite, grossular ±clinopyroxene.	magnetite, hornblende, andradite, epidote-quartz vns	Fe, Cu, Zn, Pb, W, Bi, Ag, Au.
Three Mile	limestone, dacitic tuff	epidote, garnet, calcite.	magnetite, diopside grossular, andradite	Fe, minor Cu.

Sulfide minerals occur in veins and disseminations through magnetite/mixed skarn near the margins of the magnetite bodies. The deposits are zoned, magnetite- & silicate-rich metasomatic replacement skarns containing a complex assemblage of prograde and retrograde primary minerals including base metal sulfides, scheelite, minor silver, gold and bismuth.

Weathering of the skarns

Weathering of the skarns following erosional exposure has resulted in a wide range of secondary minerals, particularly from the breakdown of primary sulfides. including some rare or unusual carbonates and sulfates.

The limited abundance of sulfides relative to magnetite may have affected chemical conditions during weathering. Early formed sulfates appear to have been protected by magnetite.

There are differences in the secondary minerals between the two main skarns that could reflect different degrees of incision by the Paddy's River, (e.g. linarite, brochantite more abundant at the Half Mile skarn).

Geological history of the Paddy's River area

1. Volcanic activity from the Mid-Silurian (ca 420 Ma).
2. Deposition of Paddys River Volcanics and interbedded limestone lenses.
3. Burial, tectonic compression, folding, granite intrusion, skarn formation, faulting.
4. Uplift, erosion to form modern land surface, incision of Paddys River, exposure and weathering of the skarns.

The Minerals

Garnet-rich skarn: Garnet minerals: Andradite $\text{Ca}_3\text{Fe}_2(\text{SiO}_4)_3$; Grossular $\text{Ca}_3\text{Al}_2(\text{SiO}_4)_3$



Octahedral crystals of andradite in actinolite,
Two Mile Deposit.



Loose garnets in soil, Two Mile Deposit.

Tungsten Minerals



Scheelite, on hornblende-anthophyllite rock,
Two Mile Deposit.

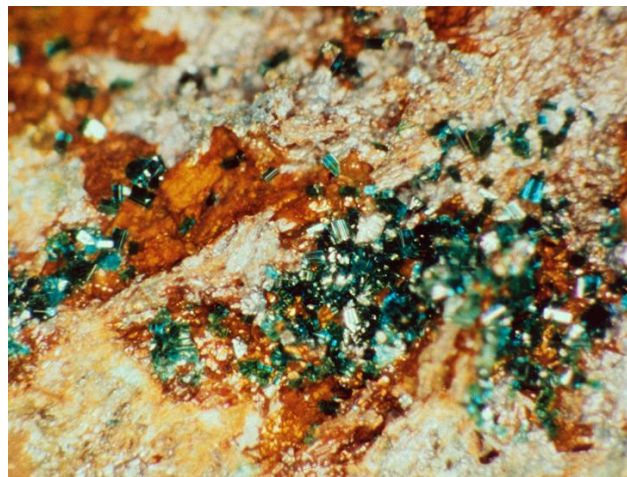


Cuprian scheelite (greenish) and langite (blue),
on magnetite-amphibole. Two Mile Deposit.

Secondary Minerals: Sulfates

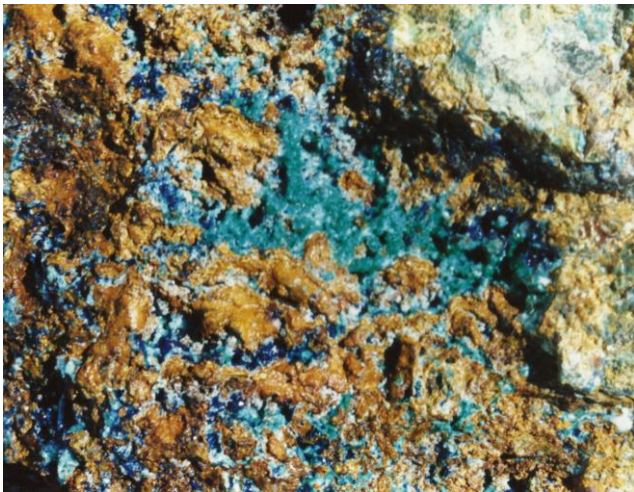


Linarite $\text{PbCu}(\text{SO}_4)(\text{OH})_2$

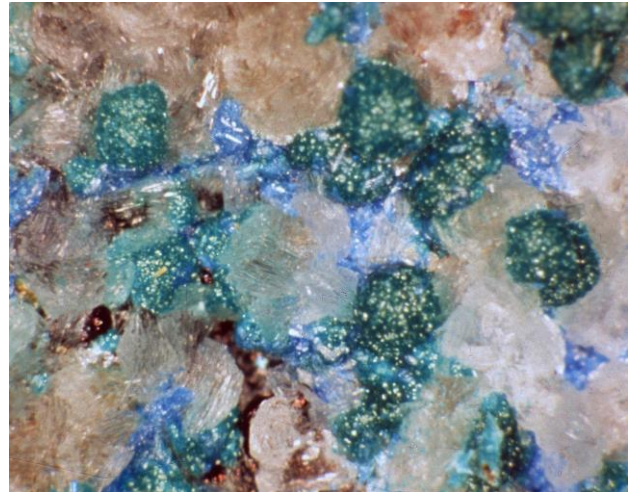


Brochantite: $\text{Cu}_4(\text{SO}_4)\text{OH}_6$
Striated crystals to 0.2 mm on limonite.

Carbonates



Azurite and malachite
 $\text{Cu}_3\text{CO}_3(\text{OH})_2$ $\text{Cu}_2(\text{CO}_3)(\text{OH})_2$



Malachite pseudomorphing brochantite on hemimorphite intergrown with linarite.



Twinned crystals of cerussite PbCO_3

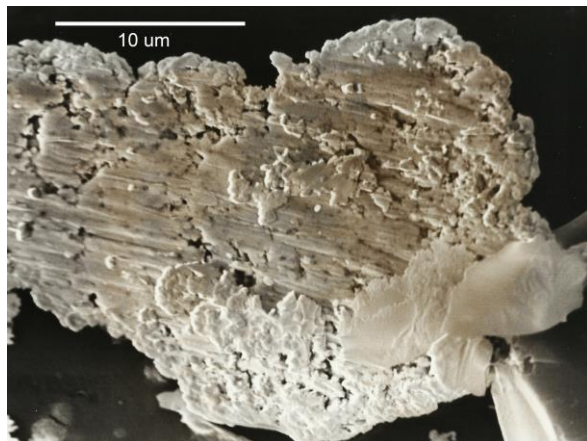


Rosette of tabular crystals of hemimorphite
 $\text{Zn}_4\text{Si}_2\text{O}_7(\text{OH})_2 \cdot \text{H}_2\text{O}$

Secondary Gold from Two Mile Gossan

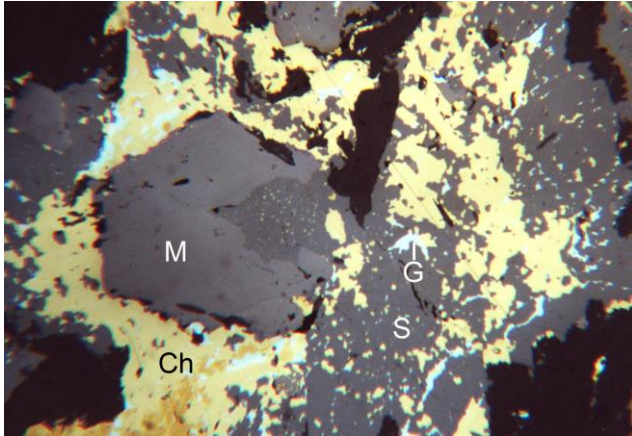


2 mm



Mustard Gold

Other abundant skarn minerals include diopside, hedenbergite, hornblende, actinolite, tremolite, chlorite group, and quartz.



Ch –chalcopyrite G – galena M – magnetite
S - sphalerite



Chalcopyrite (Zn,Fe^{3+},Mn^{2+}) $Mn_3^{4+}O_7 \cdot 3H_2O$

At the end of his lecture Professor Mc Queen dealt with a number of questions including ones from members who had been attending by Zoom. He was finally thanked on behalf of the Society by Graham Ogle who offered him a gift in appreciation, chosen by John Chapman, of a bottle of wine appropriately named ‘Colossal Cave’.

FORTHCOMING EVENTS

GEMKHANA 2022, NSW’s Annual Gem and Lapidary Show

9am – 5pm Saturday 24th & Sunday 25th of September 2022 at the Hawkesbury District Agricultural Show Grounds 40 Racecourse Rd, Clarendon.

‘Featuring Desert Fire Designs, Hand crafted Jewellery, Faceted Stones, Polished Stones (Cabochons), Stone Carving, Minerals & Fossils. Free Parking and ATM on Site. Camping is also available on site.

Children’s Activities. Adults \$10 Children under 16 Free’.

Inquiries: Contact Bob McLean gemkhana@gemlapidarycouncilnsw.org.au

Central Coast Crystal Gem & Lapidary Show

Saturday 15th October, 9am-5pm, Sunday 16th October, 9am-4pm
at the Mingara Event Centre, Wyong Rd, Tumbi Umbi

‘Exhibitors and sellers of crystals, gemstones, minerals, fossils, jewellery, beads and more.

Adults \$5 entry fee Children under 18 FREE

For more information: Telephone secretary @ 02 4362 2246’

Northern Districts Lapidary Club Gem Show

To be held in the Beecroft Community Centre, Corner Beecroft Road & Copeland Road, Beecroft, over the weekend of the 29th & 30th October, both days 9 am to 5 pm.

'Sales of minerals, slabs, jewellery (incl. sterling silver), books and lapidary equipment plus displays of the club members' creations. Entry \$5.00, children under 16 free.'

The Canberra Lapidary Club Spring Gemcraft & Mineral Show

To be held over the 29th & 30th October from 10am to 5pm Saturday, 10am to 4pm Sunday
In the Exhibition Park (EPIC) Mallee Pavilion.

Sales by Lapidary dealers of Gems, Minerals, Jewellery Minerals, fossils, jewellery, rough & cut gemstones, crystals, opals, beads. Displays of members' collections.
Demonstrations of cabbing & faceting. Refreshments.

The Illawarra Lapidary Club Inc

2022 60th Anniversary Exhibition: Jewellery, Gems and Mineral Festival

Will be held over the weekend of Saturday the 5th & Sunday the 6th of November 2022.

Saturday 9am – 4.00pm, Sunday 9am – 2.30pm. In the Ribbonwood Centre, Heining Hall, 109 Princes Highway, Dapto.. Parking access from Heining Street, off Fowlers Road.

Featuring – Fossicking Information, Jewellery Valuations, Gemstone Faceting, Club Information, Mineral Group Displays, Silver craft, Kids Games, Traders Selling – Lapidary Supplies, Jewellery, Minerals, Findings, Fossils, Beads, Opals, Crystals.

Refreshments Available. \$5 Admission – Children Under 12 Years Free. Lucky Door Prizes

www.illawarralapidaryclub.com.au

THE MINERALOGICAL SOCIETY OF N.S.W. INC

NOMINATION FORM FOR ELECTION OF OFFICE-BEARERS

AND COMMITTEE MEMBERS FOR 2022/2023

POSITION	Name of Nominee (Please print)	Signature of Nominee
OFFICE-BEARERS		
PRESIDENT
VICE-PRESIDENT
SECRETARY
TREASURER
COMMITTEE MEMBERS		
MEMBER
MEMBER
MEMBER
MEMBER
MEMBER

PROPOSER:

Name (Please print):

Signature:

Date: