



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 APRIL 2025

The April Meeting will be held in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville, at 7.30 pm on the 4th of April.

The program will include a lecture to be given by Lee Spencer on :-

Wolframite

Collector Crystal Localities and Common Mineral Associates.

Hubnerite to Ferberite

David Colchester will also deliver the second of his talks on :-

‘Introduction to Crystallography – Part 2’

FORTHCOMING MEETINGS and PROGRAMS

May 2nd: Member’s Annual Mineral Auction.

Members are invited to start selecting specimens for sale of up to about one dozen per member. A list of these will be compiled and distributed to members in due course.

Previous auctions have generally dealt with up to about eighty specimens being sold during the evening up to about 9.30 pm. At about a dozen per vendor that gives the opportunity for six to seven members to select specimens for sale and provide lists.

In addition to single specimens trays of minerals may be sold by silent auction.

June 13th : There will be the lecture to be given by Dioni Cendon on :-

‘Rare Earth Elements (REE): Misconceptions, Oddities, and some Minerals’

David Colchester will give the third of his talks on: - Introduction to Crystallography – Part 3.

July 4th: Program not confirmed

August 1st Society A.G.M. and the Mayne/Walkers Memorial Lecture.

The Memorial lecture may be given by Lindsay Gilligan, title to be confirmed.

The SOCIETY COMMITTEE

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National Gem & Crystal Expo 2025

'The Largest Indoor Gem & Crystal Expo in AUSTRALIA'.

Hawkesbury Indoor Stadium, 16 Stewart St, South Windsor.

Saturday and Sunday the 12th & 13th of April

9:30 till 5:00 on Saturday and 9:30 till 4:00 on Sunday.

The Society Committee feels that the Gem & Crystal Expo which will be attended by a large number of the general public is an excellent venue through which to promote the Society and our activities.

Society members are urged to consider helping supervise an information table to be attended by a roster of members providing an hour or two each morning or afternoon of the two days of the Expo to help promote the Society. The members would be able to answer questions from the public about Mineralogy and refer to some demonstration materials and equipment. Display specimens for the information table including specimens collected on field trips would be welcome. In addition members are again invited to bring in specimens from their collections to display in the Expo exhibition hall central illuminated display cases.

Any members who are able to provide a morning or afternoon of the two days of the Expo to 'man' the information table or provide a mineral specimen display are asked to contact the Secretary, George Laking on 0468 387 899.

FIELD TRIP TO MANUKA

Thanks to some determined lobbying by Society members the mining company Manuka Resources gave permission for a Society field trip to be made to their Wonawinta (Manuka) deposit in late April. The deposit, about 120 klm south of Cobar, central NSW, is an open-cut silver base-metal mine that is currently on care and maintenance, and is known for its large amount of easily collectable smoky quartz crystals displaying a variety of elaborate, unusual and rare forms. Collectors on previous visits have sometimes come away with mouth-wateringly large numbers of specimens after only an hour or two collecting.

Brian Holden would be running the trip over the dates of the 28th, 29th and 30th April and has had to limit the size of the party to twenty people. Members have already been notified by e-mail about the trip and fairly promptly the list of attendees was fully subscribed.

Names of members applying to attend the trip who did not get on the list will be kept 'in reserve'. It should be understood that the prospects of holding another trip at all soon would depend on negotiations to be made with the Manuka management who need to be approached diplomatically.

Reconnaissance Visit to Prase Mine at Nundle

Mark Syme and Denis O'Brien

March 2025

Mark Syme and I travelled to Nundle in early March to visit this site. Mark had been there before and so led the way. The road to the mine passes by an old Serpentine quarry which has plenty of interesting specimens.

The Prase Mine at Nundle is a well-known collecting site for green Prase and glittery drusy quartz. It is located 6km east of Nundle on the outskirts of Hanging Rock village. The track in to the mine is now a designated fire trail and is gated.

We parked near the locked gate. A walk of 1.7 km is now required to reach the mine which is situated on a steep slope running down to a small creek.

There is abundant material which is easily collected from the ground without digging. The Prase varies in colour from a dark blue green through to a light green. The specimens often include glittery drusy quartz making attractive specimens.

The hill side is quite steep and covered in bush and loose stones containing Prase. The size of the Prase material varies from say, football size (and larger) down to small pebbles.

All material collected must be carried out. On our first day, the walk in took just 20 minutes. The walk out with a bucket of rocks took 50 minutes. On the second day I took an old backpack and carried the rocks out that way. It was much easier.

It pays to be selective.

The distance to Nundle from Orange is 445 km and is a 5-hour drive.

The distance from Sydney to Nundle is 400km and is 4.5-hour drive.

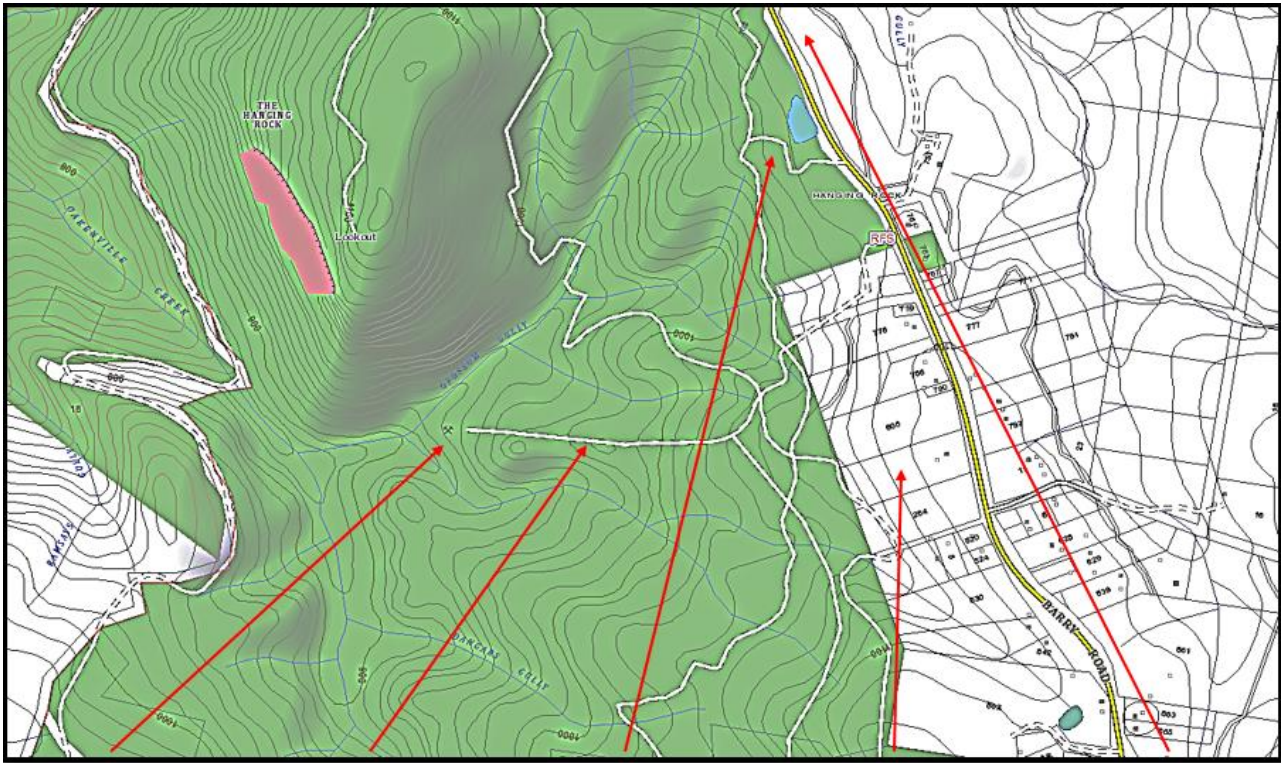
Accommodation is available at the hotel and the Motel opposite.

The Prase mine is probably not a viable option as a Minsoc field trip. It may be viable as an overnight visit or a long weekend.

The weekend that we were at Nundle was very hot reaching 36 degrees. By necessity our time collecting each day was limited. The specimens shown here were all collected by me and are only average. Better specimens have been found by Mark Syme and others.

Following are a map and specimen photos.

Denis O'Brien 5th March 2025



Prase Mine Fire trail (locked) Serpentine quarry Hanging Rock village To Nundle (8km)



Prase specimens



The MARCH MEETING

At the commencement of the meeting Dieter Mylius reminded members to sign in to the attendance register and also to look to paying their membership subscriptions before the end of this month if they had not already done so.

Mark Walters reported that contacts had been made with the **Manuka Mine** management and possibly a **field trip** might be organised for a date in **April**.

Graham Ogle reported that he had joined a field trip organised by the **Victoria Mineralogical Society** and accompanied a number of the Victoria society members to a wolfram mine at Pittong which is about an hour and a half drive from Melbourne airport. It was an interesting trip and Graham came back with an amount of micro specimens from the location.

John Chapman reported on a visit he and other members had made in February to the **Wollongong Rock Swap** which is organised by the Illawarra Lapidary club. The main purpose was to sell as much of the donated Godwin collection as possible with the proceeds to be given to the **Kids with Cancer Foundation**. The sale was very successful and generated a little over \$1,000, (and another approximately \$650 from previous Godwin sales at Society meetings since October and at the Christmas Social).

Dieter Mylius reminded members about the forthcoming **Hawkesbury Expo** in mid-April and urged members to offer to help supervise a Society information table. Hopefully this might attract a few new members and particularly younger members since as Dieter advised, the Society membership was ageing and new blood was needed, including, if not notably, for the Society Committee.

The President next announced that the Society was giving a gift voucher to **Marian Ong** in appreciation of her regularly providing refreshments, described as 'fabulous', at the Society meetings. It had been intended to make the presentation at the Christmas Social but Marian had not been at the Social and Dieter Mylius had been away from Sydney for the February meeting. Dieter suggested that Marian might make use of the voucher at the Society Auction in May to buy a specimen she might favour.

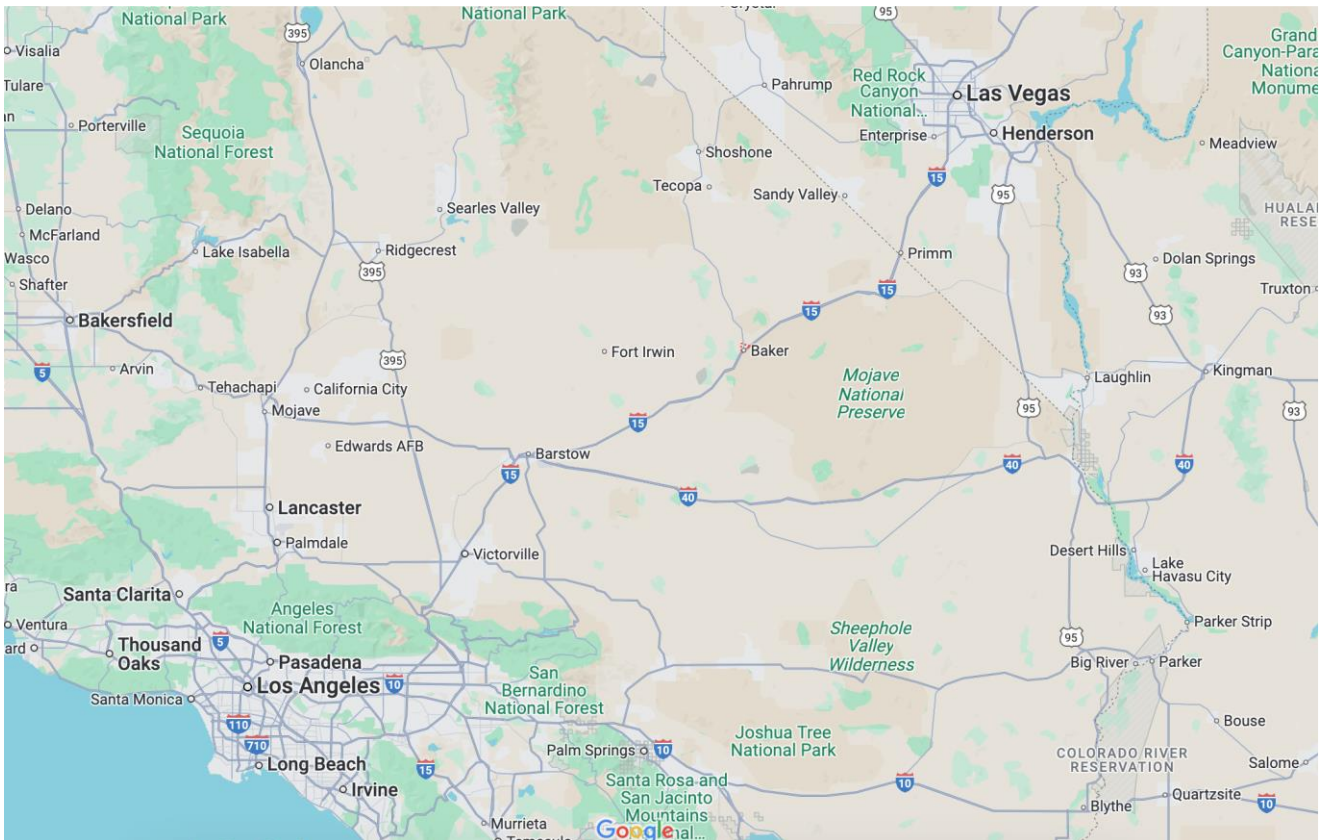
The President introduced the first speaker for the evening. Society Treasurer Graham Ogle has been able to do a great deal of traveling about the World in the course of his work and was regularly able to take some time during his travels to visit sites of mineralogical or mining significance. Over the years he has been able to deliver a number of lectures of many sites which most people may have heard of but few have been able to visit. This evening he was to describe a visit he made last November to the Otto Mountain mine in California, U.S.A.

'Minerals from Deposits at Otto Mountain, California'

Graham Ogle

Graham Ogle initially described how his interest in Otto Mountain was piqued in about 2012 when he purchased a bag of Otto micro specimens from Mikon Minerals in Germany and also another bag from Moctezuma in Mexico. 108 minerals including 16 type minerals have been identified from this site which is more than those from Broken Hill. Accordingly he had in mind to try and visit the site but because Otto Mountain is in the area of Death Valley and to be avoided in the (northern) summer, he could not visit for many years until he had occasion to travel to America in November last year.

In visiting Los Angeles where he had contacts and knowing that whilst Otto Mountain was some distance from the city but very near to the interstate highway from L.A. to Las Vegas, Graham Ogle was able to arrange for a vehicle driven by two helpful Americans to take him to the site. The approximately three-hour drive followed the highway from L.A. to the small town of Baker and then the vehicle turned off to the mine which was about 2.5 klm from the town.



Southern California. The town of Baker is near the middle of this map.

Helpfully a local Baker businessman had erected a large thermometer, (*The World's Tallest* according to the local tourist office), to indicate the ambient temperature which very thankfully in November was about 57⁰F, compared to a temperature of 134⁰F recorded in Death Valley in 1913.

Baker has a population of about 735 according to a 2010 census and whilst Death Valley is some 200 klm to the northwest of the town, Baker is on the main route to the Valley and has a number of tourist-oriented features.



The World's Biggest Thermometer at Baker.



The Interstate Highway



The road to the mine

Otto Mountain is about 2.5 klm from Baker and about 2.5 klm at its base. It is part of the Soda Mountains Range in the Mojave Desert in San Bernardino County, California. The geology is of granodiorite, quartz diorite, and gneiss cut by quartz veins usually 1m or less wide which can outcrop. Sulphide blebs occur sporadically in the quartz veins, but no orebody was ever found.

The mine was prospected in the 1880s and 1890s and whilst no record of the names of miners was kept the mine acquired the name “Hopeless Hill”. A miner, Otto Feutterer, came out from Europe in 1940 and although even then in his 60s filed six claims, working until the 1970s (by then in his 90s!), opening most shafts with A.G.Andrews helping in the first decade. They were hoping to find copper or gold and a couple of truckloads of hand-picked ore were sent for smelting but this did not cover the cost of the transport. The site was later renamed “Otto Mountain” by people in Baker.

A large number of minerals have been identified from the site and Graham Ogle displayed a list of 108 noting that most were green and 16 were type minerals including one named for Otto Feutterer, fuettererite, $Pb_3Cu_6^{2+}Te^{6+}O_6(OH)_7Cl_5$. Notably found were bright green crystals of khinite, with specks of gold and wulfenite. Phosphohedyphane was found on a specimen by Robert Housley in 2004. A large number of other workers have been to the site and on one occasion found a concentration in a small unmarked working – ‘Bird’s Nest Drift’. Other researchers included Brent Thorne, Tony Kampf and Stuart Mills who gradually found more and more new and uncommon minerals.



The speaker and local guide at the mine



The mine workings

The minerals were associated with blebs of sulphides including galena, pyrite, chalcopyrite, hessite, and in one location, sphalerite. Partial oxidation of the sulphides in the highly brecciated quartz had caused the hessite, (Ag_2Te), to release tellurium which had formed a number of tellurates and tellurites. Of the type minerals, all contain tellurium and are otherwise combinations of lead +/- copper, some with chloride, also one with uranium and another with chromium. Gold was sometimes found with the khinite or in the quartz.

During his visit to the Otto Mountain mine Graham Ogle managed to collect a number of minerals, most of which he had identified but had sent some to Brent Thorne for confirmation. The finds, all micros, included pyrite, chalcopyrite, galena, sphalerite, presumed hessite, chrysocolla, malachite or brochantite, calcite, siderite, wulfenite, khinite, timroseite and gold.

A final image shown by the speaker was of timroseite, $\text{Pb}_2\text{Cu}_5(\text{TeO}_6)_2(\text{OH})_2$, taken from Mindat.

Photos of Timroseite (57)



Timroseite

Bird Nest E3, Otto Mountain, Baker, Soda Mountains, Silver Lake Mining District, San Bernardino County, California, USA



Timroseite, etc.

Bird Nest drift, Otto Mountain, Baker, Soda Mountains, Silver Lake Mining District, San Bernardino County, California, USA



Timroseite

Bird Nest drift, Otto Mountain, Baker, Soda Mountains, Silver Lake Mining District, San Bernardino County, California, USA

The second speaker for the evening was introduced by Dieter Mylius.

Dayna McGeeney is a Scientific Officer, Mineralogy & Petrology, at the Australian Museum. She has a particular interest in gemstones and was to deliver the lecture which she had previously given to the 46th Annual Seminar of the Joint Mineralogical Societies of Australasia in Brisbane last October.

For her lecture Dayna had provided a biography of her background and work, very extensive notes and a series of images of brilliant gemstones. The following summary can only present a small fraction of the lecture and images.

‘Rare and Unusual Gemstones in the Australian Museum Collection’

Dayna McGeeney

‘Dayna studied geology and spatial information systems at UNSW. Her 1st class honours project investigated surface stratigraphy and gold geochemistry distribution in the Busai area of Woodlark Island, PNG. She then took a position at the Water Research Laboratory, UNSW, managing the Geotechnical Centrifuge Lab and the chemistry lab, as well as being part of a research team investigating the aquitard groundwater system in the Naomi area of NSW. Through these experiences, Dayna spent a lot of time in the field and learned a number of different analytical techniques and instrumentation usage, including stereo and petrographic microscopy, x-ray diffraction, geotechnical centrifuge testing, particle size distribution, liquid water isotope testing, heavy mineral separations and drill core logging.

Today, Dayna uses this knowledge and understanding to assist in curating the Australian Museum’s 81,000+ specimen collection of minerals, rocks, gemstones, meteorites and tektites. Her collection management plays a role in investigations of the collection’s heritage, mineral, rock and locality identifications, setting up public gallery displays, aiding visiting researchers and interacting with the public for specimen identification and understanding more about rocks and minerals. In recent years, she has become interested in gemstones and the way in which they provide another level of mineral understanding and enjoyment.

Through sponsorship of the Australian Museum, she has completed a Diploma in Gemmology in 2022 taught by the Gemmological Association of Australia.'

The Australian Museum Gemstone Collection is a subset of the Mineralogy Collection. Gemstones will usually mean a specimen which has been cut and polished, with the exception of diamonds. They are registered as gemstones whether a crystal or faceted. Gemstones were first registered into the Museum collection in 1895 and over time the collection really increased, we currently have 839 registered gemstones. In the 1980's a large increase occurred due to acquisitions by collection staff: Lin Sutherland, Joan Henley and gemmologist Gayle Sutherland. In the last couple of decades, Ross Pogson has actively increased our rare and unusual gemstone collection, especially ore minerals as gemstones.



This stunning 55ct Namibia specimen was cut by Murray Thompson from Perth. Cuprite has a very high RI, but no dispersion as it's a cubic mineral and the light is not split. Cuprites are also very hard to cut well since they're so soft. A poorly cut cuprite will appear very dark and dull. Quality cutting will bring out their striking red colours and near-metallic lustre. But, concern must be taken as cuprite dust is toxic. Another concern for this mineral is the potential to lose colour from exposure to light.

Rarity is one of the qualities for a gemstone as well as beauty and durability. Rare is also a sign of the times. Amethyst was considered rare until the large Brazilian deposits came to light in the 1800's. In this talk I'll show some rarely cut and polished stones as they aren't normally gemstones. Most of these would be Collectors' Gems and not worn in jewellery as they're often too soft, too brittle, usually an ore mineral and at times toxic. When translucent enough, these minerals can be faceted to a stunning outcome when it's done well. It may be due to their rich body colour, sparkle and dazzle that the challenge to cut these difficult stones was taken on by a faceter.



Lead plays a vital role in forming minerals with a high refractive index, strong dispersion and strong lustre. Although you can't see it in the preceding images, this anglesite specimen has a beautiful cut displaying its dispersion. It was faceted by Maria Atkinson, you'll see her name numerous times here. She works out of the US and Australia and takes on the cutting of very difficult gemstones. She and her husband David Atkinson work together in the gem-trade and we have bought a number of stones from them over the years and also sent stones to Maria for faceting.



Here are two stones which are on display, they are from well-known localities: The green specimen is from Bulgaria and the yellow is from Spain. Sphalerite has nearly 4 times the amount of dispersion than a diamond. It also has adamantine lustre and a very high refractive index making these gemstones just sparkle!

Cerussite Gemstone, Tsumeb, Namibia

Purchased Oct 2003
28.58 ct, 17 x 16 x 10mm
RI: 1.803 to 2.078
Dispersion: strong 0.055
Facetted by Maria Atkinson



Cerussite has a high RI, strong dispersion and adamantine lustre. This combination draws skillful facettors in wanting to bring out all of this gleaming light. This is a stunning 28.+ carat stone which catches the light with ease.

Triplite Gemstone, Pakistan

Purchased Dec 2023



1.05 ct, 6 x 4mm
RI: 1.658-1.672



Dispersion: strong
Facetted by Maria Atkinson



Triplite is very difficult to cut. It has medium hardness and medium RI but a strong dispersion. The rich body colour and dispersion of this specimen is extraordinary. This triplite were bought from David and Maria Atkinson and Maria facetted each of them.

Tantalite-(Mn) Gemstone, Alto Lighoña, Mozambique

Purchased Dec 2023

1.19 ct, 5 x 4 x 3mm

RI: 2.19 to 2.34

Dispersion: very strong

Ex Prof Walter Oberholzer Coll

Ex David and Marin Atkinson PC Coll.

Facetted by Marin Atkinson



Tantalite. This very rich red gemstone is to be dazzeled over. Very high RI, Very strong dispersion. This came from the Atkinson's personal collection. Prior to that it was in Prof Walter Oberholzer's collection. He collected a few crystals during his PhD of the Alto Lighona Mine after World War 2.

Stibiotantalite Gemstone, Alto Lighoña, Mozambique

Purchased Dec 2023

0.86 ct, 5 x 4 x 3 mm

Ex David & Maria Atkinson Coll.

Facetted by Maria Atkinson



RI: 2.37 to 2.45

Dispersion: strong

Another critical mineral, Stibiotantalite is mined for tantalum and niobium content. It's also another toxic mineral you don't want to wear due to its Antimony content. This mineral is in the orthorhombic system, hardness of 5.5, but does have adamantine lustre. When transparent, this beautiful lemony yellow colour can occur. It has a very high RI and strong dispersion. The way the centre image is taken you can also see the doubling of the back facets that's created by the double refraction.

Rhodochrosite Gemstone, N'Chwaning Mine, South Africa

Purchased Jan 1981
 10.89 ct, 12mm x 14mm x 8mm
 RI: 1.578 to 1.820
 Dispersion: Low 0.015

It's All About the Colour



Most rhodochrosite gemstones are the massive form and polished into cabochons or freeformed. Sometimes the challenge is taken up to facet a translucent crystal. The difficulties are the 3 planes of perfect cleavage. With perfect cleavage, low hardness, and heat sensitivity, rhodochrosites make challenging stones to cut and wear. The RI is medium to high and the Dispersion is low. So what's special about this gemstone must be all about its stunning colour.

Crocoite, Red Lead Mine, Dundas, TAS



Purchased Nov 2018
 RI: 2.31-2.66
 Dispersion: Strong
 1.75 ct, 5mm x 6mm x 5mm
 Facetted by Maria Atkinson



Crocoite gemstones are far too soft and brittle to actually wear and require extremely gentle handling. The colour and dispersion is so good that even very small gemstones are a treasure to enjoy. Crocoite has a very high RI and strong dispersion making this an eye catching gemstone from across the room.



Thank you

FORTHCOMING EVENTS

The Illawarra Lapidary Club Inc: Open Day Sunday 4th May.

At 51 Meadow Street, Tarrawanna 2518. Sunday 4th May, 2025 – 9am to 2pm – Free Entry
 'View the Club Rooms, purchase Mineral Specimens, Fossils, Lapidary Materials, Jewellery & more.
 Morning Tea (proceeds to the Cancer Council's Biggest Morning Tea) and Sausage Sizzle Lunch available.'

'Download Brochure. You can find us at our website www.illawarralapidaryclub.com.au
 or like and follow us on Facebook <https://www.facebook.com/IllawarraLC>
 or Instagram <https://www.instagram.com/illawarralc/>

Lismore Gemfest: The Lismore Gem and Lapidary Club Inc.

Being held over Saturday 17th & Sunday the 18th of May in the Showgrounds, Lismore, 116 Alexandra Road, Lismore, Northern NSW, from Saturday 9:00 am - 5:00 pm to Sunday 9:00 am - 3:00 pm.

Contact: lismore.gemfest@gemclublismore.org.au
 Web: www.lismoregemfest.com.au

Blaxland Gem & Mineral Club Gem Show

Sat/Sun 16-1 August 2025 8:30 to 4 pm daily

Displays and Sales of lapidary work, gems, rocks, minerals, jewelry, beads and gemstones

Entry: Adults \$3, Children \$1. In the Glenbrook Community Hall

Great Western Highway, Glenbrook (adjoining the Glenbrook Theatre).
