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 NOVEMBER 2022

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

Members attending the meeting should sign the Attendance Register and anyone who feels unwell or has had recent contact with a COVID infected person should not attend the Meeting.

A 'Zoom' invitation link will be sent out a few days prior to the Meeting for interstate members and others to attend the Meeting in virtual mode.

At the Meeting there will be a lecture to be given by Lee Spencer on : -

'The Emperor Gold Mines'

At the November Meeting there will also be the sale of minerals donated for the **Kids with Cancer Foundation.**

PLEASE REMEMBER TO BRING IN SPECIMENS

Specimens to be sold should be provided with the name, location if known and the donor's recommended sale price and in advance of the sale could be communicated to Peter Beddow by e-mail - *plbeddow@tpg.com.au,* or telephone 8810 8446 to compile a sale list. Otherwise specimens may be brought in without prior notice on the evening.

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FORTHCOMING MEETINGS and PROGRAMS

Saturday December 3rd Christmas Social and Swap N' Sell.

It has been decided to hold the Christmas Social during day-light hours on Saturday probably between 10.00 am and 3.00 pm, (times to be confirmed). Last year the Social was held during the day and was thought to have been more favourable and convenient to members.

The Social will comprise the sale or exchange of mineral specimens and mineralogical material, books, magazines and equipment. Unlike last year when regulations were in place it will be possible to provide refreshments. Accordingly members attending the Social will be asked for an entrance fee.

2023: The Society does not hold General Meetings in January and the first Meeting in 2023 will be on February the 3rd. Meetings will be held at the Parramatta and Holroyd Lapidary Club on the first Friday of each subsequent month through the year except in April when Good Friday is on the 7th and the Meeting would be held on the second Friday.

The SOCIETY COMMITTEE

PRESIDENT:	Dieter Mylius	Tel: (02) 9477 1060
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	David Colchester	Tel: (02) 9449 3862
	Geoff Parsons	Tel: (02) 9548 3289
	Mark Walters	Mobile: 0421 012 647

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FIELD TRIPS

The proposed Field Trip to Mt Tennyson which was to have been held over the October 22nd/23rd weekend had to be cancelled due to heavy rain over the area which had saturated the ground and the forecast was for it to have been continuing over the Trip period. It is hoped to re-schedule the Trip for later this year or early next. Trips to other locations are also being considered.

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The OCTOBER MEETING

The October Meeting was opened by the Society President, Dieter Mylius, who welcomed members and also a similar number who were attending by virtual mode. At the commencement of the Meeting there were a few announcements.

The scheduled talk by Jim Sharpe on Sampleite had to have been cancelled due to Jim being indisposed. Mark Walters reported that the **Field Trip to Mt Tennyson** was still on track for the 22nd and 23rd of October, subject to weather conditions, and members intending to join the Trip should check with him nearer to the date for final details.

Dieter Mylius reminded members about the **Kids with Cancer Sale** of donated minerals to be held at the November meeting and recommended that members try and provide a generous amount of material to be sold. He pointed out that several trays of minerals had been brought in this evening by Noel Kennon as donations to be sold for the Kids with Cancer charity. The trays should be purchased complete, if members wished to purchase any minerals they were asked to pay for and take the whole tray.

The lecture for the evening was given by Society member Noel Kennon who provided a Power Point montage of a large number of very colorful gemstones and the following notes.

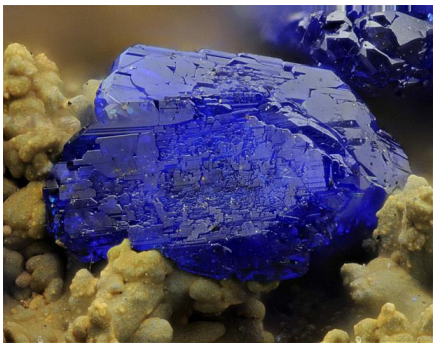
'Colour and the Colour of Minerals'

Noel Kennon

Noel started the talk by asking 'is colour useful in mineral identification?' But more basic questions are, 'what is colour?' and 'why do minerals have particular colours?'

Colour, he said, arises from the nature of light which is waves of radiant energy travelling at about 300 million meters per second. The distance between adjacent waves is the wavelength which varies from very long radio waves to very short x-rays and gamma rays. Somewhere in the middle is the narrow band of radiation which our eyes can detect – the visible spectrum. We see an object because our eyes detect the light reflected by it or transmitted through it. But, part of that light incident on the object is absorbed during reflection or transmission and it is only the unabsorbed light that reaches our eyes. It is electrons in the object that absorb the energy but only if the electrons can move into vacant energy states. It is this principle that governs which energies (wavelengths, colours) are absorbed.

Noel went on to talk about the three kinds of colour of minerals. The first kind are idiochromatic (self-coloured) minerals for which the colour is due to the chemical composition and structure. Since these are specific to each mineral the colour in each of those minerals is more or less constant as in azurite, malachite, cinnabar, crocoite, rhodochrosite, molybdenite, pyrite and schorl for example that he briefly talked about.



Azurite $Cu_3(CO_3)_2(OH)_2$

Crocoite $PbCrO_4$

Cinnabar HgS

Some idiochromatic minerals are always opaque

Molybdenite MoS_2

Pyrite FeS_2

Schorl $NaFe_3Al_6(Si_6O_{18})(BO_3)_3(OH)_3OH$

The second kind of coloured minerals are allochromatic (other-coloured), containing inclusions of a second mineral or by impurities in the composition. Small fragments of hematite will colour quartz red-brown while crystals of hedenbergite or actinolite will colour it green.

Hematite in Quartz

Actinolite in Quartz – Prase

Rutile in Corundum - Star Ruby

Impurities of transmission metals in the composition change the available electron sites and so influence the color of minerals such as corundum, quartz, beryl, and diamond. Some allochromatic minerals are colourless when pure but when containing a particular impurity have a specific colour

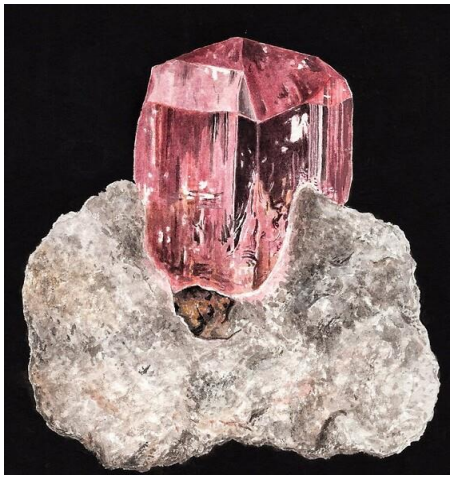
Beryl $Be_3Al_2Si_6O_{18}$ v goshenite

Beryl (+ Fe) v aquamarine (blue)

Beryl (+ U) v heliodor

Topaz $Al_2(SiO_4)(F,OH)_2$

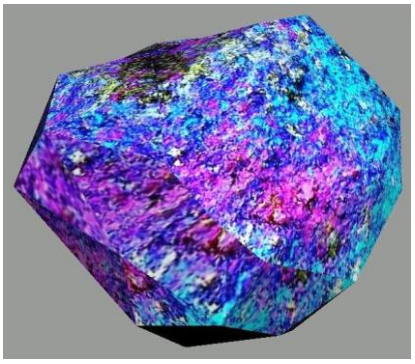
Topaz (+ Fe: Fe^{+2} or Fe^{+3}) blue



Topaz (+ Cr) pink

Finally, the third kind are the pseudochromatic minerals which are falsely coloured by optical effects such as interference and diffraction which accounts for the colour of opal.

Plagioclase feldspar – labradorite



Chalcopyrite

Opal – Virgin Rainbow

The talk was concluded by going back to mineral identification and pointing out that while for many minerals colour should be useful in identification. However for many others the colour of the powdered mineral was likely to be a mineral characteristic. The colour of idiochromatic minerals is characteristic and is the true colour of the mineral whereas the colour of most allochromatic minerals is not true. Then the streak test which gives the colour of the powdered mineral may be applied. The small amounts of impurities in fine randomly oriented particles do not greatly affect the absorption of light and consequently the streak colour is true. All forms of quartz, beryl, corundum and others have a white streak but many others have a characteristic streak and so the test is helpful in identification.

Finally Noel pointed out that the colours in which every known mineral occurs have been collated and show that whilst yellow is the most common (32%), followed by brown, green, red/pink and black whilst orange, purple and violet are the least common (5%).

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FORTHCOMING EVENTS

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, Heininger Hall,
109 Princes Highway, Dapto.. Parking access from Heininger 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

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Parramatta/Holroyd Lapidary Club—Annual Exhibition

Being held in the Clubrooms at 73 Fullagar road, Wentworthvuille
over Friday to Sunday the 11th to 13th of November 2022.

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Carlingford Gem and Crystal Expo

The Carlingford Gem and Mineral Expo will be held in the Roselea Community Centre on Pennant Hills Road, Carlingford, over the weekend of the 26th and 27th of November 2022.

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GEMBOREE 2023

The 59th Gemboree, the National Gem & Mineral Show, will be held over Easter 2023 – from the 7th to the 10th of April in the showgrounds at Dayboro, a country town about 45kms NW of Brisbane. For more information: www.gemboree2023.com.au.

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