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 OCTOBER 2024

The October Meeting will be held on Friday the 11th of October at 7.30 p.m. in the clubrooms of the Parramatta and Holroyd Lapidary Club at 73 Fullagar Road, Wentworthville.

Members Please Note: The October Meeting is being held on the second Friday of the month.
The first Friday of October is before the long weekend and Public Holiday of Monday the 7th, (Labour Day).

The program at the October meeting will include a lecture to be given by Brenainn Simpson on : -

Petrogenesis of Central NSW: (Geochronology and Mineralogy)

There will also be a talk by David Colchester on : -

Introduction to Crystallography – Part 1

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FORTHCOMING MEETINGS and PROGRAMS

November 1st: It is hoped that there will be lectures to be given by Adam McKinnon and Ian Graham, the program and subjects of the lectures are to be confirmed.

Saturday December 7th **Christmas Social, Swap and Sell.** The Christmas Social will be held on the first Saturday in December at the Parramatta and Holroyd Lapidary Club during daylight hours between 11.00am to approximately 3.00 pm. The Social will comprise the sale or exchange of mineral specimens and mineralogical material, books, magazines and equipment etc and the opportunity to socialise. Food and drinks will be provided which will include a BBQ Sausage Sizzle at midday.

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The SOCIETY COMMITTEE

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THE SEPTEMBER MEETING

The Meeting was opened by the Society President, Dieter Mylius, who noted that the membership attendance was rather light and that there appeared to be as many members attending the meeting in virtual mode as there were 'live'. The President reminded members that the forthcoming October meeting would also be held on the second Friday, the 11th, after the Labour Day long weekend.

The President referred to the **Field Trip to New England** which had been held over the previous week. The trip had been very successful and several large specimens comprising matrix with an amount of glistening cassiterite crystals on the surfaces had been brought in to display. Haley Bambridge then described the trip in some detail with reference to a number of images, of the countryside, of the members fossicking and of the mine sites dumps and minerals found. A detailed and illustrated report on the field trip is being prepared by Denis O'Brien and will be included in a subsequent Newsletter and added to the Society Website. Brian Holden who had organised the field trip which had involved him in a considerable amount of preliminary time and travelling around New England, visiting and negotiating with landowners or managers, was thanked for his work on behalf of the field trip party and the Society.

The first lecture of the evening was delivered by Dieter Mylius and described a visit he made to the Eifel area of Germany in 2013 to investigate a number of quarries. The speaker has made many trips to Germany over the years, investigated and collected from a large number of sites there and has lectured to the Society on many occasions about his trips and visits to various interesting localities.

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A Light Globe Moment and an Unusual Mineral

Dieter Mylius

Location of the Eifel district in western Germany

The Eifel landscape is one of undulating hills, rich green farmland, dotted with low relief small craters and maars (lakes). Maars are broad, low-relief volcanic craters caused by magma erupting explosively through water, which are then typically filled with water to form relatively shallow, circular lakes.

A section of the Mylius mineral collection. Described in some detail in the lecture given to the June 2023 Meeting during the Member's Forum on Maintaining and Cataloguing your Mineral Collection:

' Every so often I pick a box and have a look inside – this time I picked two boxes marked Schellkopf These go back to 2013 when we visited this quarry in Germany. Schellkopf is in the Eifel Volcanic Province which is a huge volcanic field of about 600 square klms, a plateau, with about 240 cones and maars, spreading from the Rhine River into Belgium and Luxemburg. The last eruption is estimated as being about 13k years ago, centred on the current Laacher See (a crater lake, 2klm across).

Best known amongst mineral collectors is the eastern section around the Laacher See. There are nearly 400 quarries, mines and mineral occurrences in the Eifel district, some metallic mines around the perimeter, but many interesting quarries in the volcanics exploiting road base, basalt, and pumice. There are several so-called "kopfs", or heads, which are the residual cones or protrusions – Wannenkopf, Rotherkopf, Perler kopf and Schellkopf. Schellkopf is a phonolite quarry

Wannenkopf (tub head)	Rotherkopf (red head)
Perler kopf (pearl head)	Schellkopf (ringing head)

And here's my light globe moment

After decades of being interested in minerals and geology, my light globe moment is the word "phonolite".

Phono – from Greek; Phon means sound, hence phonograph, phonetics, microphone, saxophone, gramophone, telephone. Also symphony, cacophony.

Lite – from Greek; lithos means stone

Therefore Phonolite – sound stone, or a rock that makes a sound. Phonolite is hard and dense, and when you hit it with a hammer, it rings like a bell. Hence Schell (regional German schallen = to ring) and kopf (head).

For those interested in such things, the Aris Quarry in Namibia is also in a phonolite, well known amongst mineral collectors for the large number of unusual minerals found there. When you hit it your hammer bounces and there is a loud sound of a bell. There are a few phonolites in Australia, notably the Tanja Complex a little off the Tathra Bermagui Rd in NSW, and the Springsure Volcanic Field a little north of the Carnarvon Gorge National Park in Queensland. However, they are not generally sought out and I know little about them.

What are Phonolites?

Phonolites are fine grained felsic volcanic rocks, basically devoid of quartz, with between 10-60% foids. Shorthand for felspathoids. Phonolite contains minerals such as nepheline and leucite rather than quartz. The quartz equivalent would be trachyte. If they were coarser they would be called nepheline syenites. Foids are aluminosilicates which resemble feldspars, but have a lower silica content.

They include:

Nepheline	$Na_3K(Al_4Si_4O_{16})$	Leucite	$K(AlSi_2O_6)$
Sodalite	$Na_4(Si_3Al_3)O_{12}Cl$	Hauyne	$Na_3Ca(Si_3Al_3)O_{12}(SO_4)$
Nosean	$Na_8(Al_6Si_6O_{24})(SO_4)\cdot H_2O$		

Some people include analcime in this group as well. Simplistically, if you could react a felspathoid with quartz you would get a feldspar.

Schellkopf minerals: Type locality for two minerals, brenkite and vandermeerscheite. (The entire Eifel province has 50+ type locality minerals). Of the 37 other minerals recorded from Schellkopf cavities, the more common ones are:-

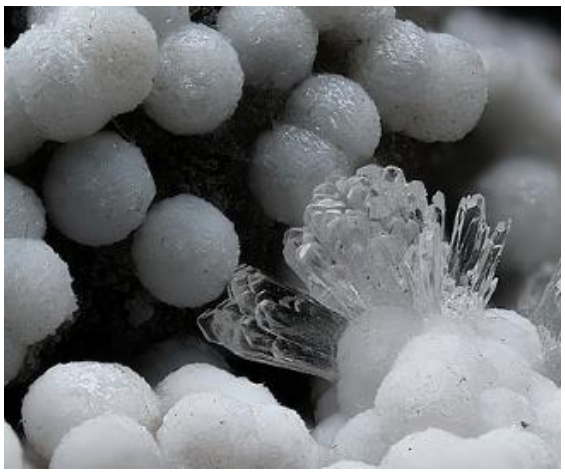
Phillipsite-K	$(K,Na,Ca_{0.5},Ba_{0.5})_{4\text{-}7}[Al_{4\text{-}7}Si_{12\text{-}9}O_{32}].12H_2O$ (by far the most common)
Gonnardite	$(Na,Ca)_2(Si,Al)_5O_{10}\cdot 3H_2O$
Zeophyllite	$Ca_{13}Si_{10}O_{28}(OH)_2F_8\cdot 6H_2O$
Calcite	$CaCO_3$
Chabazite	$(Ca,K_2,Na_2)_2[Al_2Si_4O_{12}]_2\cdot 12H_2O$
Ettringite	$Ca_6Al_2(SO_4)_3(OH)_{12}\cdot 26H_2O$
Thaumasite	$Ca_3(SO_4)[Si(OH)_6](CO_3)\cdot 12H_2O$.

Found the first 4, and am not sure whether there is any brenkite – they all look very similar and are very small.

Brenkite - $Ca_2(CO)_3F_2$ (1978). Fov 5mm

Vandermeerscheite - $K_2[(UO_2)_2V_2O_8]\cdot 2H_2O$

Brenkite: Fov 4.9mm



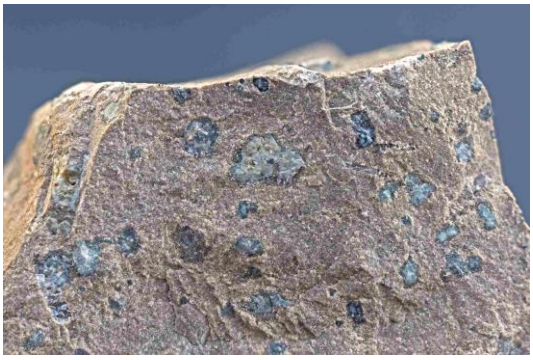
On Zeophyllite. Fov 3.5mm

All images courtesy Mindat

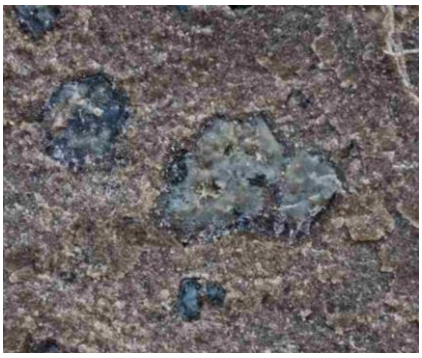
The unusual mineral at the quarry is nosean. The host rock is a nosean phonolite, with prominent phenocrysts of blue to grey to white nosean, most with colour zoning. It is just about ubiquitous in the quarry. You cannot help collecting it. Associated with it is some sanidine and pyroxene in the range of aegirine to aegirine-augite.

Nosean is a felspathoid (foid) $Na_8(Al_6Si_6O_{24})(SO_4)\cdot H_2O$

It occurs in phonolites and related undersaturated volcanic rocks, volcanic bombs and ejected blocks. It is Cubic, and mainly occurs as grains, massive, and dodecahedra. It has a hardness of 5.5, an SG of 2.3-2.4, poor cleavage, and is a member of the sodalite group of minerals. Its type locality is another locality on the south eastern edge of the Laacher See, only about 6km from Schellkopf. Originally described in 1815 by Klaproth, named after Karl Nose, a physician in nearby Bonn, who was also a chemist and mineralogist. ’



Nosean: Fov 25mm



Fov 8mm

At the end of his lecture Dieter Mylius drew member’s attention to some samples of phonolite with euhedral to sub-hedral nosean phenocrysts from Schellkopf which he had brought in to display and offered them to members to take away if they wanted samples of nosean for their own collections.

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The second lecture of the evening was given by Malcolm Southwood by virtual mode since the speaker is resident in Melbourne. The speaker’s subject was : - **Smithsonite from Tsumeb: Colour and Chemistry**. Malcolm has asked that a report on his lecture should not be made in the Society’s Newsletter or added to the Website until he has delivered it to one or more other societies. Accordingly a report will be made in due course, possibly in the New Year.

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FORTHCOMING EVENTS

LAPIDARY, CRYSTAL, GEM & JEWELLERY SHOW

The Central Coast Lapidary Club Inc

The Central Coast Lapidary, Crystal, Gem & Jewellery Show is going to be held on Saturday the 19th & Sunday the 20th of October at the Mingara Events Centre, Wyong road, Tumbi Umbi, Central Coast.
For more information : - Tel 02 4362 2246 Secretary *cclc@gmail.com*
Facebook.*com/centralcoastlapidaryclub*

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Cessnock Gem and Mineral Club Auction: Saturday 2nd Nov 2024

Being held in the Cessnock Gem & Mineral Clubhouse, Hall Park, Stephen Street, Cessnock West, NSW.

Commencing at 10:30 am *(Viewing from 10:00 am.* Gems, Slabs, Cabachons, Faceting Material, Fossils, Specimens and Jewellery. Light Refreshments available at small cost. Cash & Card Accepted.

For more information – Lynda Marshall – Auction co-ordinator. email: *merriwa2001@yahoo.com.au*

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Canberra Spring Gemcraft & Mineral Show.

Being held in the Mallee Pavilion at the Exhibition Park In Canberra (EPIC),
over the 2nd & 3rd of November.

. For more info call Norm on 0407 718 347 or email: nmenadue@optusnet.com.au

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