Sussex Mineral & Lapidary Society

# Newsletter

Issue 05 June 2024

*Dunnottar Castle, East Scotland*

## From the Editor

Welcome to the fifth edition of the SMLS Newsletter. Thank you to all this months contributors, I hope you enjoy the selection, if you missed one, newsletters are now stored on the club website pages in the members only section.

*Samantha*

*smlsnews72@gmail.com*

## Inside this issue

# *From the Chair*

Dear Members,

Summer has arrived and SMLS is busy with talks, field trips, Lindfield village day preparations and of course the November show preparations. The 'show and tell' session in April, as a replacement to the annual competition, was very well supported and thanks to members for bringing along specimens and displays to share with other members. The May meeting was from Norman Moles looking at the zeolites of Northern Ireland, this was a prequel to the planned field trip in September. Apologies to those on zoom who experienced sound difficulties. We have switched to a bluetooth headset and to be honest are still unsure why it caused issues. Norman's talk will be available as a pdf on the SMLS website. 8 members ventured back to Skye a couple of weeks ago. The weather was just about perfect with lots of sunshine and a small amount of drizzle but overall great. A mixture of site seeing, collecting and generally relaxing depending on your mood. A couple of new sites introduced by Nick were Flodigarry and Torrin Marble quarry. Flodigarry is more known for its fossils but also has very large concretions similar to Sheppey, some of which contain Baryte, or so we were told. They took a bit of breaking and they were fascinating objects but sadly no Baryte was found. Second area was the marble quarry at Torrin, the hope was to find skarn minerals but like Flodigarry it was a fascinating place geologically and lots of marble but no skarn minerals identified (as of yet). Prior to this trip we visited Wanlockhead as a guest of Jon Evans, 13 members attended. It was great to get back after many years of exile and the weather was perfect. Thanks Jon for being our host.

Looking ahead we have Lindfield Village day on 1st June, this is an opportunity to promote the society and of course the November show. Please come along if you fancy a good day out. We are also progressing with the November show and two requests to members. If you have material suitable for the tombola please make them available to John Pearce or bring them along to the meetings, they should be wrapped with a label and John will do the rest. Secondly, I would like to ask you to consider helping on the day, either half a day or just a few hours would be a great help, just make a note of the date in your calendar (Nov 16th) and we will follow up early autumn.

Finally we have the SMLS AGM coming up in July. As we have said previously SMLS is in a good position in the short term but faces some real challenges going forward so let me know your thoughts on what you expect from SMLS.

*Colin*

*Chesil Beach*
*Dorset, UK*

# Events

1st June – National Dinosaur Day

7th June – SMLS club meeting Novel Lapidary Commissions, John White, zoom details here

7th-14th June Field trip East Scotland

26th – 30th June - Sainte-Marie-Aux-Mine, Mineral and Gem International Show, France

5th July – SMLS Club Meeting , AGM and General Meeting. Minerals of South East Wales, By Steve Plant, zoom details here

20/21st July - North Pennines Mineral Expo.

28th July - Oxford Mineral and Fossil Show

10th August – SMLS Summer Gathering


## Next Club Meeting – Friday 7th June

Novel Lapidary Commissions, by John White

Lizzadro Museum link here

LIZZADRO MUSEUM OF LAPIDARY ART

## *In case you missed it*

The slides from the May meeting (Minerals of Northern Ireland, Norman Moles) are stored on the club website in the members only section.

## *London Gem & Mineral Show 2024 is Live*

Dates for your diary 23-24th November, Esher, exhibitor stands sold out, public tickets on sale now, details here

# News

Elana and her megalodon tooth

## *Fossils*

Amateur fossil hunter finds more than 100 moa bones on Whanganui beach

Elana Rowlands, 10, discovers megalodon tooth at Bawdsey Beach, near Felixstowe

Hunting Fossils on a Jurassic Coast! (video)

We Hunted A Beach For Dinosaur Fossils! (video)

All about fossils (The Independent)

Amateur fossil hunter finds mammoth tooth

Rare crocodile bones found in Whitby

200 million years along the Jurassic coast

Geologists reject declaration of Anthropocene

## *New TV Show on Discovery Channel*

Outback Crystal Hunters – Fearless Australian treasure hunters unearth the worlds rarest crystals. Don't miss the monster crocoite!

## *Minerals & Rocks*

Miassite superconductor mineral found

One Of Earth's Rarest Minerals Found Thanks To A 75-Year-Old Letter

Alfie Norville Gem & Mineral Museum receives significant collection and commitment for $1.6M

Driehaus Donation Adds Luster to a Gem of a Museum in Oak Brook

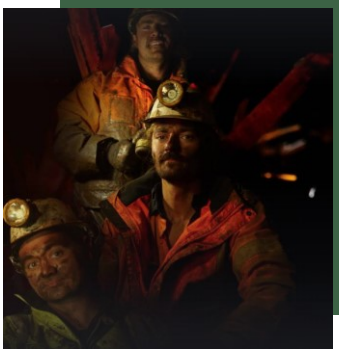
NZ's largest collection of natural stones for sale

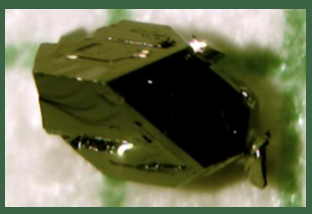
How Miners Find, Cut, And Transport The Most Expensive Amethysts In The World (video)

How Old Is My Zircon?

Scientists solve mystery of the moon's lopsidedness

Birdlings Flat Gemstone and Fossil Museum owner Vince Burke. Photo: Geoff Sloan





*Miassite - Photo credit Science Daily*

# News

Use Ctrl + Click on the underlined text to link straight to the articles.

## Gems & Lapidary

Noted gem cutter Tom Munsteiner passes away

Winchcombe meteorite fragments made into jewellery

Divorce Rings: 6 Best Styles To Celebrate A New Life

AGTA Bans Lab-Grown Diamonds, Gemstones at GemFair

Why olivine and diamonds are best friends and how that could simplify the search for precious gemstones

Here's why people invest in gemstones

Diamond Cutting for Hobbyists: Getting Started

Australian Sapphires:
the corundum that matches today's trends

Tips for Cutting and Polishing Halite

*Prince of Kafu Emerald*

*Munsteiner fantasy cut Citrine ring – credit 1stDibs*

## Something to share?

If you have read or watched something interesting email it to The Editor at smlsnews72@gmail.com and it will be considered for future issues.

## Videos & Podcasts

21 Greatest Jewellery Finds From '00s Antiques Roadshow | Antiques Roadshow

Natural Diamonds vs Lab Grown: Which Should You Buy?

Giant $20,000 Nugget Found in Alaska | Gold Rush: White Water

A Stunning 71 Carat Tanzanite Stone For Sale | Posh Pawn

*Jewellery watch suite – photo credit Sotheby's*

*Giant tanzanite – photo credit Posh Pawn*

## Objects of Vertu

Sotheby's jewellery watch auction sees a sell-out in less than 60 minutes

Pink diamond at Geneva auction

A magnificent jewelled gold and pietra dura 'Steinkabinett' box, Johann Christian Neuber, Dresden, circa 1765. Sothebys May Auction

## Global Energy Transition/Mining

Mining in Africa and its role in the global energy transition

*Unveiling the Science of Pearls: Exploring Nature's Masterpiece*

Pearls, often celebrated as the birthstone for June, are not just exquisite adornments but also fascinating creations of nature, deeply rooted in scientific intricacies. From their formation within molluscs to the cultivation techniques employed in modern pearl farming, pearls offer a captivating lens through which to explore biology, geology, and marine science.

The Genesis of Pearls: Pearls originate from a natural process known as biomineralization, where living organisms produce minerals within their bodies. Within molluscs, such as oysters and mussels, pearls form as a response to irritants that enter their shells. When a foreign object, like a grain of sand or parasite, infiltrates the mollusc's soft tissue, it triggers a defence mechanism. The mollusc secretes layers of calcium carbonate and conchiolin, forming nacre, also known as mother-of-pearl, around the irritant, gradually creating a pearl.

Types and Taxonomy: Pearls are classified based on their origin, structure, and the species of mollusc that produces them. The taxonomy of pearl-producing molluscs includes various genera, with the most prominent being Pinctada, Hyriopsis, and Margaritifera. Within these genera, different species yield distinct types of pearls, such as:

Natural Pearls: Formed spontaneously in the wild, natural pearls are exceptionally rare and prized for their irregular shapes and unique colours. The scientific study of natural pearls provides insights into marine ecosystems and environmental factors influencing pearl formation.

Cultured Pearls: Cultured pearls are the result of a deliberate process initiated by humans. Through techniques developed in the early 20th century, such as nucleation and grafting, pearl farmers insert a nucleus into the mollusc's mantle tissue, stimulating the formation of pearls. Understanding the biology and physiology of pearl-producing molluscs is essential for optimizing cultivation methods and enhancing pearl quality.

Saltwater and Freshwater Pearls: Pearls can be categorized based on the type of water in which they are cultivated. Saltwater pearls, produced primarily by species of the genus Pinctada, thrive in marine environments, while freshwater pearls, cultivated from mussels like Hyriopsis and Margaritifera, flourish in freshwater rivers and lakes. Comparative studies of saltwater and freshwater pearl formation shed light on the biochemical mechanisms underlying nacre deposition and mineralization.

*Pearls continued….*

Scientific Insights into Pearl Production: Pearl farming, or pearl culture, is a multidisciplinary field that integrates biology, aquaculture, and marine ecology. Advances in genetics, breeding, and husbandry techniques have revolutionized pearl cultivation, enabling farmers to produce pearls of consistent quality and size. Research in pearl farming focuses on enhancing mollusc health, optimizing feed formulations, and mitigating environmental impacts to ensure sustainable production practices.

Global Production and Economic Impact: The majority of cultured pearls are produced in countries with conducive marine or freshwater environments, such as China, Japan, Indonesia, Australia, and French Polynesia. These nations contribute significantly to the global pearl market, generating substantial revenue and employment opportunities within their respective regions. Understanding the socioeconomic dynamics of pearl production facilitates informed decision-making and policy development to support the livelihoods of pearl farmers and local communities.

Scientific Exploration of Legendary Pearls: Several pearls throughout history have attained legendary status due to their exceptional size, colour, or provenance. Scientific analysis, including spectroscopy, radiography, and DNA testing, allows researchers to authenticate and unravel the mysteries surrounding these renowned gems. By studying the geological formations and biological processes associated with legendary pearls, scientists gain insights into Earth's natural history and the evolution of pearl-producing organisms.

Exploring Metaphysical Properties: While scientific inquiry primarily focuses on the physical attributes of pearls, cultural beliefs and metaphysical associations also contribute to their allure. Across diverse cultures and traditions, pearls are revered as symbols of purity, wisdom, and spiritual enlightenment. Although scientific evidence may not corroborate metaphysical claims, the symbolic significance of pearls transcends empirical analysis, enriching human experiences and cultural heritage.

In Conclusion: Pearls exemplify the harmonious convergence of science, art, and nature, offering a multifaceted exploration of Earth's wonders. From their humble origins in molluscs to their transformation into objects of beauty and cultural significance, pearls continue to inspire scientific inquiry and captivate human imagination. By delving into the scientific intricacies of pearl formation, cultivation, and exploration, we gain a deeper appreciation for these timeless treasures and the natural processes that shape our world.

More about pearls here

GIA

Wikipedia

Interesting facts from The Pearl Source

## *April Club Meeting – Show and Tell*

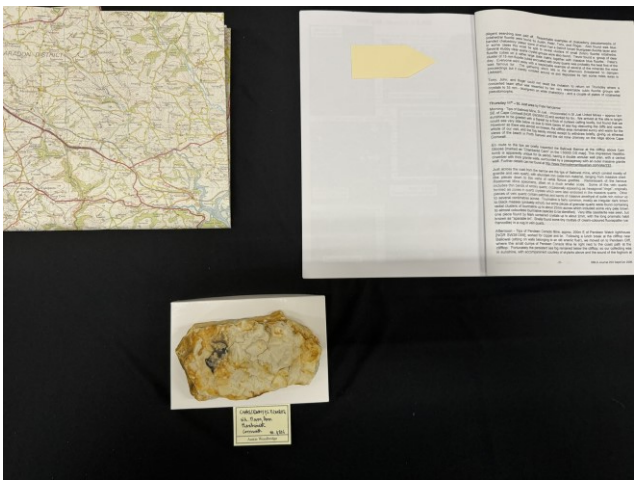
We enjoyed a great mix of show and tells at the April meeting.

Catherine's self collected selection


Rob Tripp's Indian Carnelian

Cornwall Display from Peter Nancarrow


John Pearce's' Potato Stones



Austin's self collected chalcedony/fluorite pseudomorph from Cornwall

A selection of favourites from Chris Naughton

Colin's zeolites from xx

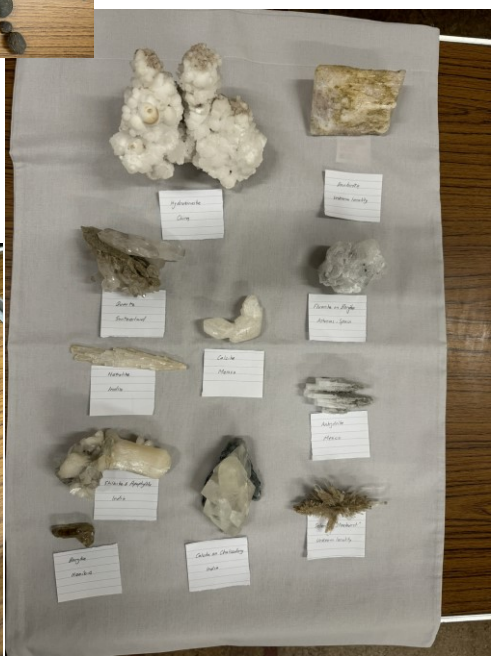
David Alderton's meteorite, it was a large one!

Beach finds – Louisa Ward

Robert Turner's phosphorescent minerals



Patricia Tomkins - Grape Chalcedony, Apophylite & Stilbite from India, also a fine malachite from Tsumeb



Michael Whitehead - selection of colourless pieces

## *National Dinosaur Day 1 June 2024*

As we approach June 1st, 2024, anticipation builds for National Dinosaur Day, a celebration of the colossal creatures that once roamed our planet millions of years ago. While often associated with childhood fascination, the allure of dinosaurs extends far beyond mere nostalgia. For adults with a penchant for science and a curiosity about our planet's history, National Dinosaur Day offers a prime opportunity to delve into the fascinating world of palaeontology and unearth the latest discoveries reshaping our understanding of these ancient giants.

Dinosaurs, the behemoths of prehistoric times, continue to captivate the imaginations of people across the globe. These creatures ruled the Earth for over 160 million years, evolving into an astonishing array of shapes, sizes, and ecological niches. From the towering Tyrannosaurus rex to the swift Velociraptor, each species tells a unique story of adaptation and survival in a world vastly different from our own.

The field of palaeontology, driven by meticulous research and groundbreaking discoveries, constantly sheds new light on the lives of dinosaurs. Recent advancements in technology, such as high-resolution imaging and genetic analysis, have enabled scientists to glean unprecedented insights into these ancient creatures' physiology, behaviour, and evolutionary relationships.

One such breakthrough involves the study of soft tissues preserved in exceptionally well-preserved fossils. These remarkable finds provide glimpses into the appearance and even the coloration of dinosaurs, challenging long-held assumptions and sparking renewed interest in these enigmatic beasts.

Dinosaurs were not solitary entities but rather integral components of complex ecosystems. By studying fossilized footprints, coprolites (fossilized faeces), and the geological record, researchers reconstruct the intricate web of interactions that characterized Mesozoic ecosystems. From symbiotic relationships between dinosaurs and early flowering plants to the rise and fall of apex predators, these investigations offer valuable insights into the processes that shaped life on Earth.

While dinosaurs may have vanished from the Earth millions of years ago, their legacy endures in the form of fossils scattered across the globe. These remnants of prehistory serve as invaluable windows into the past, providing scientists with crucial data for understanding Earth's geological and biological history.

However, the preservation of these treasures faces numerous challenges, including habitat destruction, climate change, and illicit fossil trafficking. National Dinosaur Day serves as a reminder of the importance of conservation efforts to safeguard these irreplaceable remnants of our planet's distant past for future generations.

NHM all about dinosaurs here

Palaeoart recreates extinct animals and their environments using scientific knowledge to create accurate artwork. Artwork by Bob Nicholls © 2022

## *Rethinking the Distinction Between Semi-Precious and Precious Stones: A Modern Perspective – by Samantha Durrant*

Gemstones have captivated human fascination for millennia, adorning jewellery, crowns, and ceremonial objects. However, the traditional classification of gemstones into "precious" and "semi-precious" categories is a concept rooted in history rather than intrinsic value. The internet has many interpretations of the difference between precious and semi-precious stones and the language is still commonly used.

I fundamentally disagree that this distinction remains relevant today. In this blog, we'll delve into the history of this distinction, explore why it's outdated, and why modern gemmologists often disregard it.

The Historical Context

The categorization of gemstones into precious and semi-precious dates back to ancient times. Historically, gemstones like diamonds, rubies, sapphires, and emeralds were considered precious due to their rarity, beauty, and hardness. Other gemstones like amethyst, topaz, and citrine were labelled semi-precious.

This distinction was largely arbitrary and often based on factors like availability and cultural preferences rather than objective value. For example, diamonds were considered precious due to their rarity, while topaz, though equally beautiful, was considered semi-precious because it was more abundant.

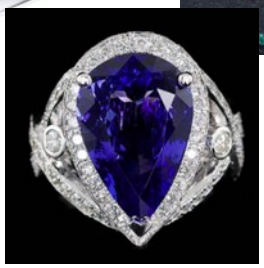
However even that historical summary is not a wholly accurate perspective of the past because for example pearls have held a special place in human history, often considered more precious than diamond by various cultures across different periods. In ancient Mesopotamia and Egypt (4000 BCE - 332 BCE) pearls were highly prized and considered symbols of wealth and luxury.

They were often used as adornments for royalty and nobility. The Egyptian funerary portrait below shows the lady wearing pearls, the other image is an imperial jade ring.

In traditional Chinese culture, jade has historically been regarded as more precious and spiritually significant than diamonds for a number of reasons. Today jade remains highly regarded among many Chinese people, especially those who appreciate traditional culture and values.

Challenging the Distinction

*Changing Market Values*: Over time, the market value of gemstones has shifted dramatically. While the traditional "big four" gemstones were once considered the epitome of preciousness, the rise of rare and exotic gemstones has challenged this notion. Stones like serendibite, alexandrite, tanzanite, and Paraiba tourmaline, which are far rarer than some traditional precious stones, now command higher prices in the market.



## *Rethinking the Distinction Between Semi-Precious and Precious Stones: A Modern Perspective ... continued*

*Subjectivity of Value*: The concept of preciousness is inherently subjective. What one person considers precious might hold little value to another. Sentimental attachment can turn a seemingly ordinary stone into a priceless treasure. A family heirloom passed down through generations may have more sentimental value than a flawless diamond.

*Quality is key*: Not all emeralds are equal, a low quality emerald may be worth £20, a high quality Siberian amethyst may be so rare and fine that it is worth thousands of pounds. I know which one I would rather have and it is not the emerald. The distinction of semi-precious and precious has no logic in this context.

*Modern Gemmology*: Many modern gemmologists recognise the flaws in the traditional precious/semi-precious classification. They understand that a gem's value is determined by a combination of factors including rarity, beauty, durability, and cultural significance. They can take a broader view of value, focus on assessing these qualities rather than adhering to outdated distinctions.

*Limits Appreciation*: The labels of precious and semi-precious can limit the appreciation of lesser-known gemstones and discourage exploration and innovation within the gemstone industry. Every year new and beautiful materials are discovered for us to use in jewellery and for spiritual purposes. Recent discoveries have included Taaffeite, Grandidierite and Jeremejevite. We should value them in a much broader context.

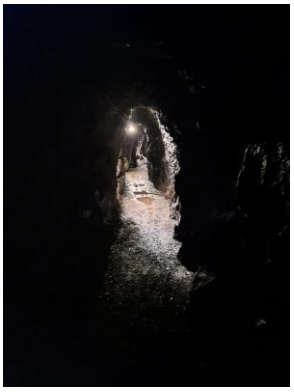
Conclusion

The distinction between precious and semi-precious gemstones is a relic of the past and very unhelpful. Modern gemmology recognises that a gem's value is multifaceted, taking into account factors beyond rarity and hardness. It's time to move away from outdated classifications and embrace the diversity and beauty of all gemstones.

As consumers, appreciating the unique qualities of each gemstone and recognizing their individual value can enrich our experiences with these precious treasures. Let's celebrate the richness of the gemstone world without being constrained by arbitrary classifications of the past.

## *Field Trip – Wanlockhead 2-3 May*

**Collecting locations visited**:
1: Old mine deposits at the old bowling club in Wanlockhead (2nd May) - this was Margaret's vein dumps. Minerals found – Sphalerite, hemimorphite – rounded masses and also crystals, bright green cadmium sulphide mineral, baryte, hydrozincite, phosphohedyphane, cerussite
2: Whytes Cleugh Valley, Wanlockhead (2nd May) Minerals found – pyromorphite, cerussite, chrysocolla, galena. Neil Hubbard may have found some of the rarities – susannite, caledonite etc but he'll need to say once he's analysed his finds
3: Belton Grain in Wanlockhead (3rd May) Minerals found – pyromorphite, cerussite



**Highlights**: Introduction to the area by a trustee (John) of the Lead Mining museum.

Visiting the museum with its range of specimens and explanatory boards and artifacts, including a walking tour of the show mine – a 600 metre excavated stretch in one of the Old lead mines under Wanlock Dod. (They are wanting to extend the excavation too so maybe there'll be an opportunity to volunteer for some mining for those who like being underground.)

Finding a hallmarked silver spoon at the bowling club. Maybe some tie to a royal visit from long ago.

Beautiful views across the highest village in Scotland and local valleys and streams.

Getting caught out in the fell in the thunder and rain on day three.

The lead mining museums millionaires slice was amazingly delicious, even when smooshed up and refrozen.

Thanks to Catherine & Nick for the write up

## *Field Trip – Isle of Skye 5-10 May*

**Collecting locations visited**:
1: Talisker Bay, north and south
2: Moonen Bay beaches
3: Oisgill Bay beaches
4 Sgurr nam Cearcall
5: Flodigarry beach
6: Torrin Skye Marble quarry

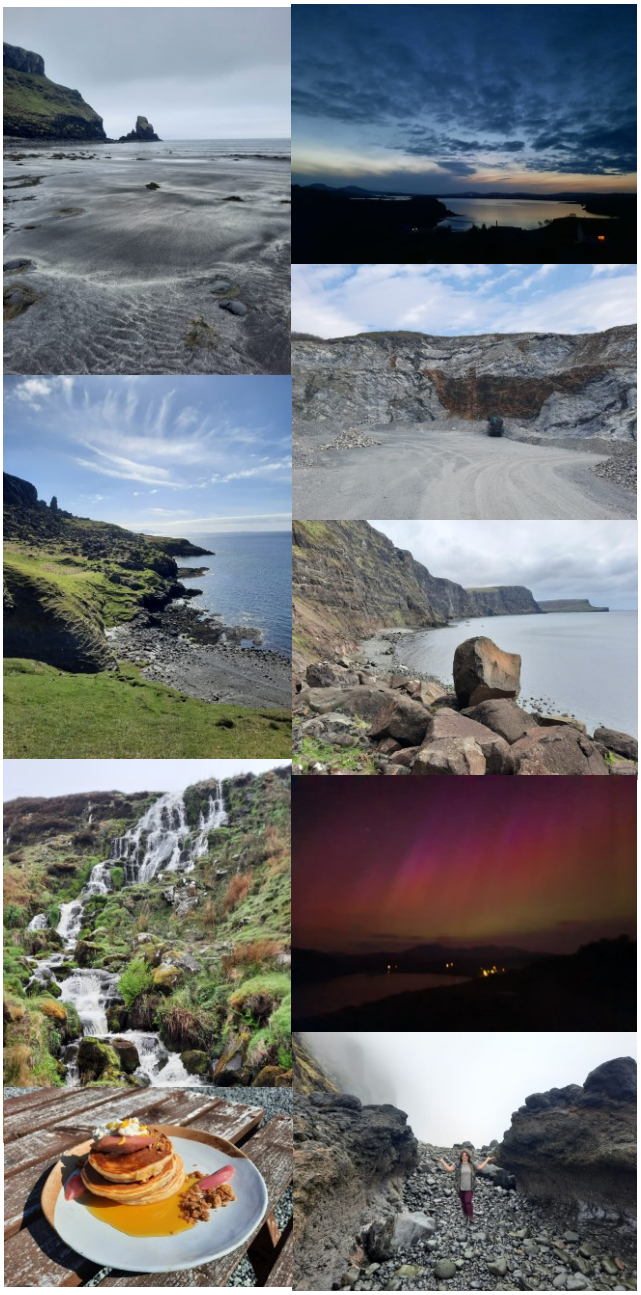

**Minerals found include**: Analcime, Thompsonite Mesolite, Chabazite, Apophyllite, Cowlesite, Levyne, Gyrolite, Green and pink marble, Orange calcite, Belemnites & Ammonites, Heulandite (to be confirmed)

**Highlights**: Gorgeous views from both self catered accommodation houses, near Carbost and Dunvegan.
Climbing down and up rope to get into Moonen Bay without too much slipping or tripping. (A pair of trousers didn't quite survive that though)
Craft day driving around to see the studios of local painters, potters and weavers. A few gorgeous paintings richer and a few pounds poorer of course. Plus the bonus of being the first people to enter the Talisker distillery shop that day, is that you pay the same price as everyone else we found out. Also found the best ever Scottish tablet at the end of a looong single track road.
Exemplary specimens from Oisgill Bay boulder which Rob spotted and with quite some team work managed to extract intact! These were of Apophyllite on Thompsonite.
Splendid time on Flodigarry beach finding belemnites and calcite in huge septarian nodules. No rare find of baryte this trip though so we just might have to go back one day.
The oyster shed in Carbost was a favourite for Nick with perfectly fresh yummy lobster.

Some non mineral related hikes were also undertaken, from forest walks, the iconic Old man and the rainy fairy pools etc. Wonderful wild flowers and amazing Cuillin views

Managed to even catch the Aurora show over the Cuillins on the last night, which was not something any of us could expect but certainly was the cherry on top of a fantastic trip with great people and amazing places!!

Will be wanting to go again pretty soon if there's an opportunity, so do get in touch if any one of you are interested. ***Catherine***



## *A short history of the Sainte Marie Show*

The Sainte-Marie-Aux-Mines Mineral and Gem International Show, also known simply as the Sainte-Marie Show, has a rich history steeped in the passion for minerals and gemstones. The event traces its roots back to the late 20th century when a small group of mineral enthusiasts gathered in the picturesque town of Sainte-Marie-Aux-Mines, nestled in the heart of the Alsace region of France.

What began as a modest gathering of local collectors and traders soon evolved into an internationally renowned event, attracting mineral enthusiasts, collectors, dealers, and experts from around the globe. The show quickly gained recognition for its diverse array of minerals, gemstones, fossils, and jewellery, as well as its vibrant atmosphere and sense of community.

Over the years, the Sainte-Marie Show has grown in both size and scope, expanding to encompass multiple venues throughout the town. Exhibitors from all corners of the world showcase their finest specimens, ranging from rare and exotic minerals to exquisite gemstones cut and polished to perfection.

In addition to its impressive array of exhibitors, the Sainte-Marie Show has also become a hub for education and research in the field of mineralogy and gemmology. Visitors have the opportunity to attend lectures, workshops, and demonstrations conducted by leading experts, providing valuable insights into the world of minerals and gemstones.

Today, the Sainte-Marie-Aux-Mines Mineral and Gem International Show stands as one of the premier events of its kind, attracting thousands of visitors and exhibitors each year. It continues to uphold its tradition of excellence while embracing innovation and the ever-evolving world of minerals and gemstones.

## *Mineral Identification Competition (4)*

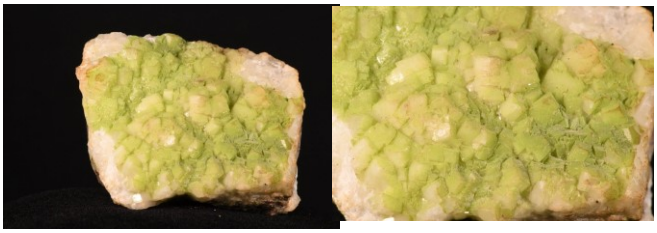
How good are your mineral identification skills? Take part for a chance to win a specimen, points will be accumulated over the year. Identity = 2 points, Country = 1 point, specific locality = 1 point. Email answers to smlsnews72@gmail.com

Specimen 03 answers were – Calcite from Devon


1st place – Rob Tripp

There is still time to catch him up though!

*Specimen 04*



## *Chuckle Corner*

## *Sales, Wants & Swaps*

If you would like to post in this section about about a specimen that you "want" or one you are "selling" or would like to "swap", please get in touch. You do not have to be a dealer to take part in this section.

## *Highlighted minerals for sale from Geminlogical – shop here*

Wavellite from Devon

Azurite from Greece

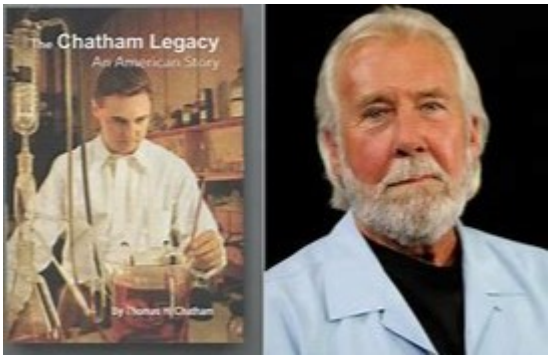
Wulfenite from Mexico

Rare Inesite & Hubeite

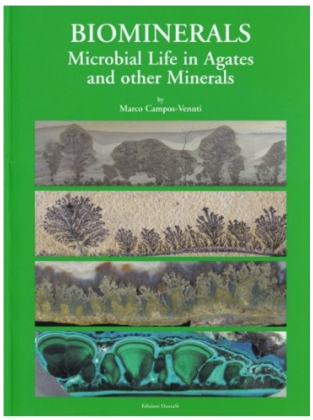
Plancheite from DRC



## *Literature*




Fantastic book by the lab grown industry pioneer, read about it here




The latest book from the Trilogy, read about it here

### *Quote of the month*

"You're not allowed to call them dinosaurs any more," said Yo-less. "It's speciesist. You have to call them pre-petroleum persons."

Terry Pratchett

## *SMLS Online*

The club website
The club Facebook Pages