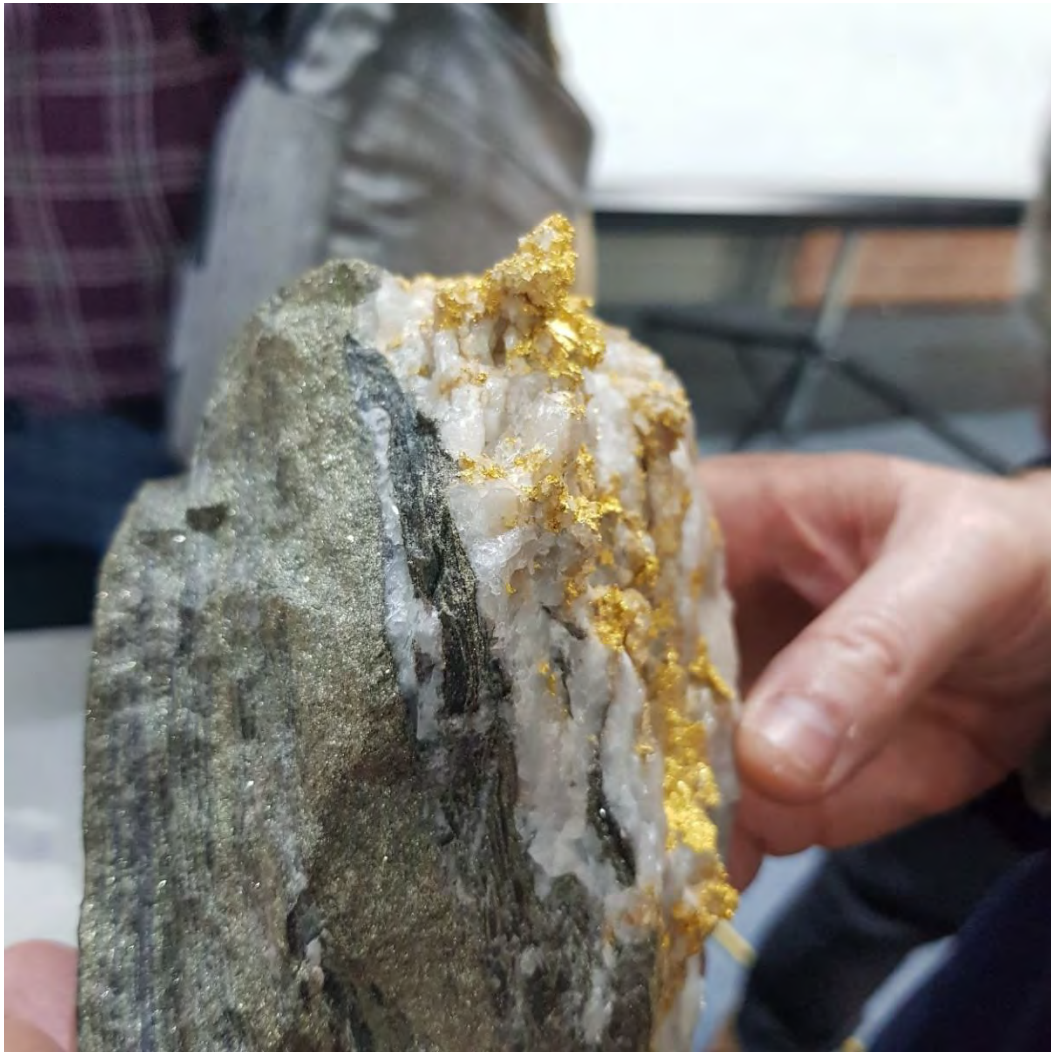




Mineralogical Society of Western Australia Inc.



NEWSLETTER
Quarter 3, 2022

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Over page: *gold specimen from the Father's Day Beta Hunt find. Specimen John Vinar; photo courtesy Olga Blay.*



Mineralogical Society of WA Inc.

Meetings held at the WA Lapidary & Rockhunting Club rooms
31 Gladstone Road, Rivervale (corner of Newey Street)
Registered Society No. A1009304P

To encourage mineralogical study by amateur and professional alike and, in so doing, discover, document and preserve the Earth's and in particular Western Australia's natural history.

EDITORIAL

Welcome to the Q3 2022 newsletter.

The 22nd **MinSocWA AGM** has come and gone, and I'd like to welcome new committee members (and welcome back old ones) with a big thank you for putting your hands up to serve on the committee. A big thank you also to all members who, in ways big and small, have in the past year supported the Society and contributed to its events. Whether by helping with the teas on the talk evenings, making donations for an auction or giving a talk ... every little bit helps to make the work of the *volunteer* committee an easier one, and to ensure the Society is a vibrant organisation where we share our passion for minerals – if you missed the AGM, check out the President and Treasurer Reports for 2021-22 in this Newsletter for all that was done in the past year.

The young and energetic **PGMS** Committee has also been incredibly busy, and this year's show is shaping up to be bigger and better than the inaugural event. Registrations for tables are closed, but donations are still sought for the auction (for which you can still purchase a ticket), and you can volunteer via the PGMS website. Please help us advertise the show to your friends and share the event via your social channels.

Following the PGMS, don't forget to register for the virtual **Joint Mineralogical Societies of Australasia** seminar at the end of October.

And time to put together your team for the **November Quiz Night** – all details and a quiz 'appetiser' are included in the Newsletter - this will be a social and fun event you don't want to miss!

As yet there is no replacement date for the field trip to Whim Creek, but we'll communicate any developments for this field trip as soon as we can.

Thank you to all that have renewed their membership ... please keep your contact details up to date to ensure you can receive all MinSocWA communications and newsletters from other Australasian mineralogical societies.

I hope to see you all at the PGMS in a couple of weeks' time.

Angela

Acting Newsletter Editor

SOCIETY ACTIVITIES

JULY TALK - The mineral EPIDOTE - one of the most outstanding display minerals

by Craig Bosel – 13 July 2022

Summarised in the newsletter by Niels Dahl, photo courtesy Allan Hart

On 13th July, Craig Bosel gave an interesting and well-researched presentation on epidote, one of the ‘rubbish bins’ of the mineral kingdom because it can host elements which do not always form minerals of their own in a rock. Craig has made epidote a major focus of his own collection with specimens exhibiting various colours and shapes from pistachio green to dark green, from prismatic or blocky individual crystals to massive granular aggregates, or to fibrous radiating or bowtie aggregates. His enthusiasm for epidote was passed on to the audience at the night, and most of us realised our epidote samples would not pass muster in Craig’s collection. Some of his beautiful specimens were exhibited with his talk.



EPIDOTE - mineralogy: crystal HABITS examples



Epidote was first named by Professor René-Just Haüy in 1801 from the type locality Le Bourg-d'Oisans in the French Alps southeast of Grenoble. It is named after the Greek word ‘epidosis’ (meaning ‘increase’) because one side of the prism is longer than the other. Epidote is a monoclinic sorosilicate (the structure based on two SiO_4^{4-} tetrahedra sharing a central oxygen ($\text{Si}_2\text{O}_7^{6-}$ groups)) with the prismatic habit elongated along the b-axis. Cations fill in between the lattice of the silicate tetrahedra. Ca^{2+} , Al^{3+} , Fe^{3+} are the most common ones, but also Mn^{3+} , Mg^{2+} , Ti^{3+} , Fe^{2+} , Mn^{2+} , Y^{3+} , Th^{4+} , Ce^{3+} , La^{3+} and OH^- have been identified. It has a hardness of 6 to 7 with a vitreous lustre. Cleavage is perfect along $\{001\}$ and twinning is common along $\{100\}$.

EPIDOTE - mineralogy

► Epidote-SuperGroup (IMA 2006) general formula > $A_2M_3(Si_2O_7)(SiO_4)O(OH)$

- Clinozoisite $A = Ca, M = Al$ pale brown
- Piemontite $A = Ca, M = Al, Mn, Fe$ red
- Allanite $A = Ca, Mn, Ce, M = Fe, Al$ dark brown/black

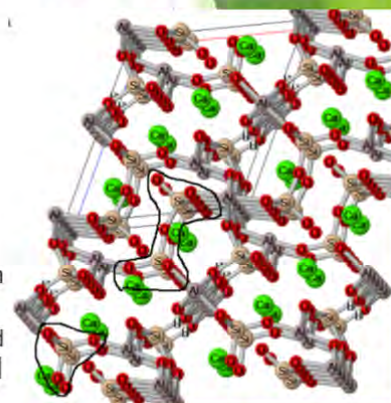
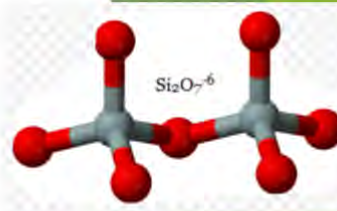
plus 32 other rarer minerals e.g. Hancockite, Tweddillite

► Epidote-Group (IMA 2009) epidote forms a solid solution series with clinozoisite (with Fe^{3+} substitution for Al^{3+} in the M site).

► Epidote end-member mineral > $Ca_2(Al_2Fe^{3+})(Si_2O_7)(SiO_4)O(OH)$ a hydrated calcium aluminium iron silicate

► Epidote is a SOROSILICATE ... i.e. has an internal structure that includes pairs of silica tetrahedra joined by a shared oxygen atom

On the molecular scale, Epidote consists of continuous chains of AlO_6 and $AlO_4(OH)_2$ octahedra parallel to the B-axis, bridged by both single $[SiO_4]$ and double $[Si_2O_7]$ tetrahedra.



The Epidote Supergroup of minerals consists of Epidote *sensu stricto* along with clinozoisite, piemontite, allanite and at least 32 other rarer mineral species. Clinozoisite and epidote form a solid solution series known as the Epidote Group, sometimes both species occurring in a single crystal making definitive naming of the specimen difficult.

Epidote is a common rock forming mineral, appearing in many metamorphic rocks and is stable in the greenschist and epidote–amphibolite metamorphic facies. Saussuritization of feldspars results in microscopic formation of epidote. It is also common in late-stage veins in granites.

Display specimens of free-standing crystals for mineral collecting, however, are rare. The best examples come from exoskarns and Alpine-type fissures. In Australia good examples of epidotes can be found at Mitchell Plateau in the Kimberley and at Harts Range, Northern Territory. Overseas, the Ras Koh Mountains in Baluchistan Province in Pakistan, Lefkopetra in Greece and Green Monster Mountain on the Prince of Wales Island in Alaska were pointed out as especially notable locations for quality epidote specimens. The Ras Koh Mountains have yielded the

foremost examples of bowtie twins of epidote, as well as impressive pseudo-hexagonal and pseudo-octagonal examples. Semiprecious varieties of massive epidote have been found in metasomatized granites (unakite) and metasomatized mafic rocks (epidosite).

Ras Koh Mountains, Kharan District, Balochistan Province, Pakistan

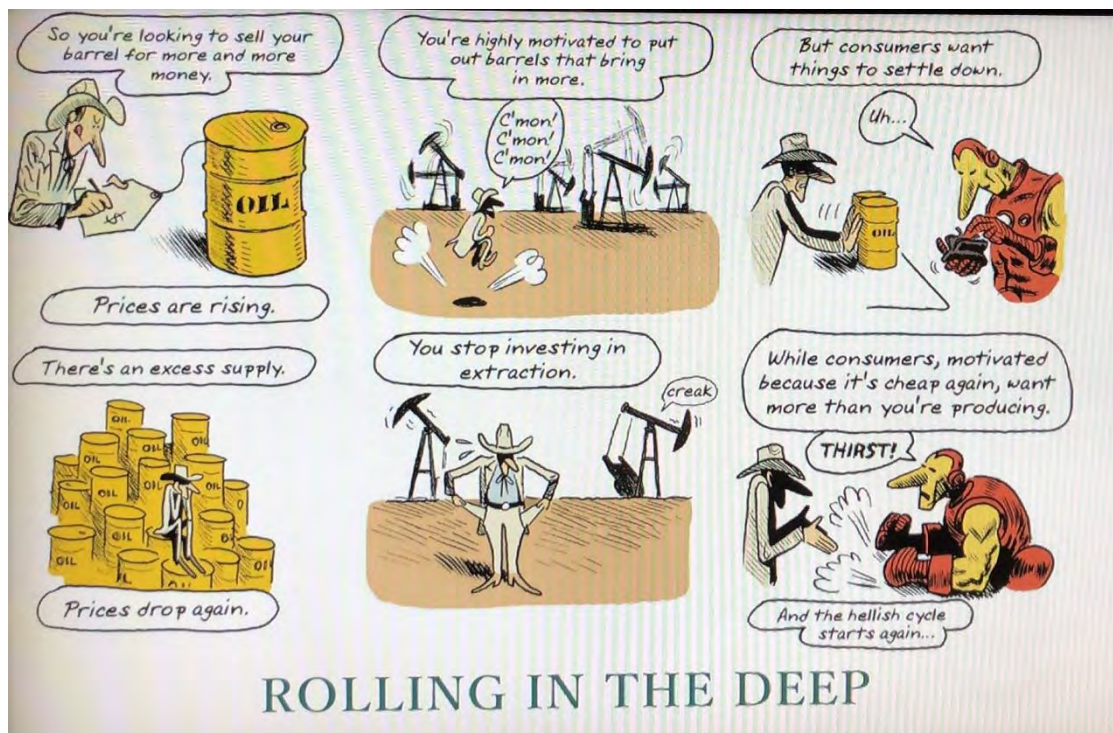
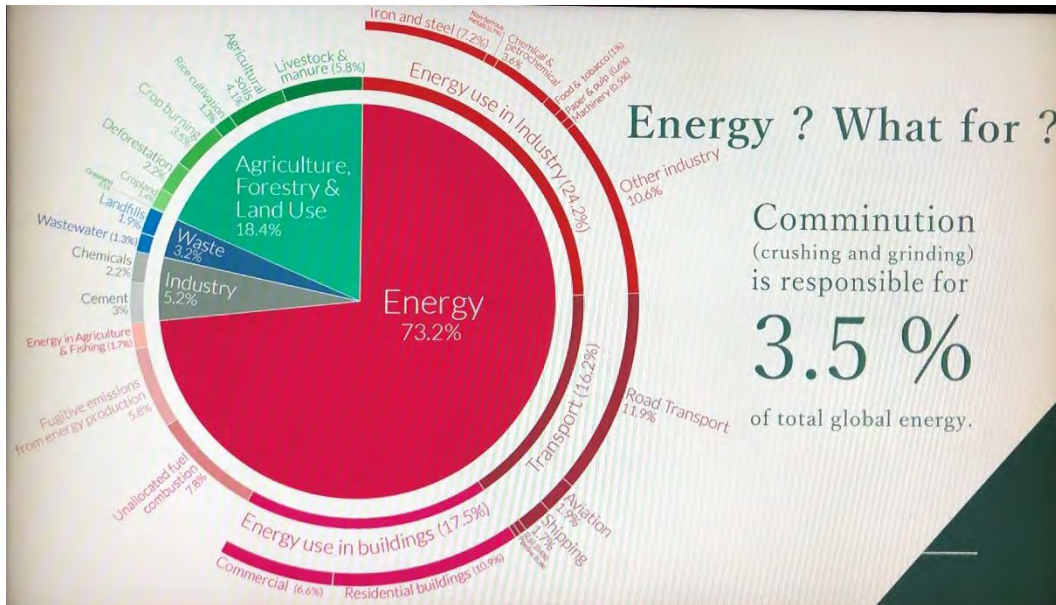


2. 'BOW TIES'

AUGUST TALK - Energy and climate through the lens of a geologist

by Nicolas Hébert – 22 August 2022

Due to a technological hiccup, not all of Nic's talk could be recorded on the evening, but Nic has endeavoured to complete the recording and make it available soon. In the meantime, you can watch some of his other mineral talks on [Nicolas HÉBERT - YouTube](#)



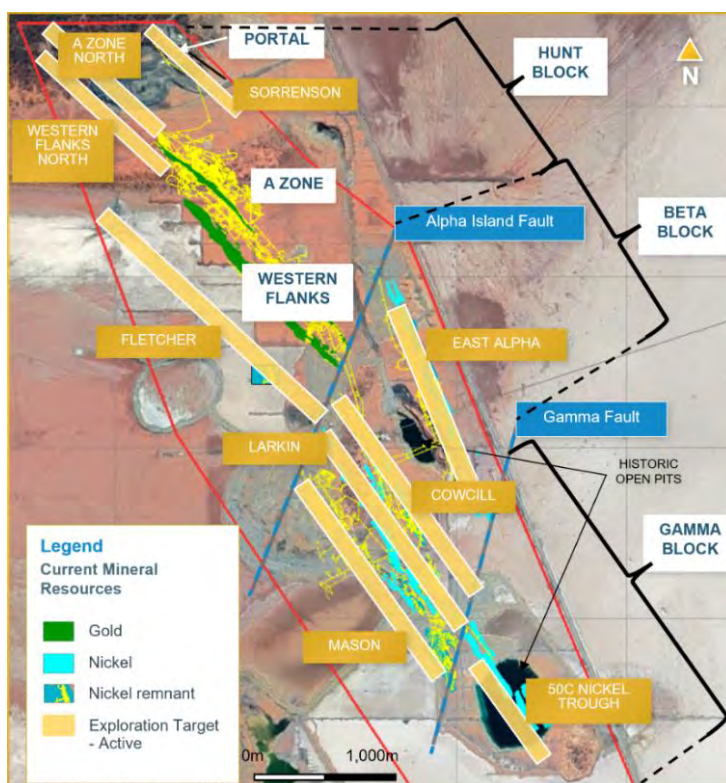
SEPTEMBER TALK - On the Hunt for Specimen Stone, Beta Hunt Mine, Kambalda, Western Australia

by John Vinar, Barking Outback Pty Ltd – 7 September 2022

Summarised in the newsletter by Niels Dahl, photos courtesy Olga Blay

On Wednesday 7th September 2022, members of Mineralogical Society of Western Australia were feasting their eyes on slides of gold samples from the Beta Hunt gold and nickel mine (Kambalda, Western Australia), presented by former geology manager at the mine, John Vinar. Beta Hunt was a nickel mine operated by Western Mining Corporation from the 1970s to 2001, when it was sold to Gold Fields Limited (a South African company) with a separation of the nickel and gold rights. The nickel rights were acquired by Reliance Mining Ltd in 2003 and passed on to Consolidated Minerals Ltd in 2005. It was placed on care and maintenance from 2008 to 2013, when Salt Lake Mining re-combined the nickel and gold rights. Nickel operations re-started in 2014, shortly followed by gold production. Karora Resources acquired Salt Lake Mining in 2016 and is not operating the mine.

Beta Hunt is part of the very rich Kambalda gold belt located on the eastern flank of the Kambalda dome on the boundary of Lake Lefroy. The strata continue under the lake and are also mined under the lake. The nickel-bearing strata of ultramafic komatiite units include sedimentary rocks and basalt units strongly dipping to the east. Specimen gold from Beta Hunt consists of large quartz veins highly enriched in native gold. They formed en echelon in basalt and a pyritic sediment unit in the footwall stratigraphy of the nickel ore. John's team showed how this sediment unit could be followed over hundreds of metres underground and could be used as a marker horizon in their geological mapping of the mine. Grey calcite veins were also located in this horizon. Economic grades of gold were intersected in a pyritic hanging wall sediment at A-zone.



1 - Setting of the Beta Hunt gold and nickel mine (source <https://www.karoraresources.com/beta-hunt-mine>)

When the nickel market became weak during the recent economic crisis, Beta Hunt struggled financially and changed direction focussing on the mining of its gold resource. The gold resource expressed itself to a large degree as specimen gold which was realised during John's tenure as geology manager at the mine. Until then, a full understanding of the gold geological setting was lacking, to some degree evidenced by employees kicking stones carrying native gold on the ROM pad between the grades of nickel ore. During the mining for nickel, specimen gold exposures were concreted over in the drives. Drillholes during the nickel mining days could show 2.3% native gold over 0.1 m and hole BE 20-44 intersected nuggetty specimen gold. It was speculated that the specimen gold may occur in a dilation zone which also hosts a porphyry dyke.

The mine showed up to be extraordinarily rich in specimen gold. The best quarter was the 3rd Quarter of 2018 during which 40 000 tons of gold were mined. The richness of gold lodes was such that John instigated air leg mining for some of these lodes. Bulk mining will not discover specimen gold, sadly management can be hard to convince of the value of mining specimen gold.



2 - MinSocWA members feasting their eyes on the native gold specimen brought along by John Vinar

A particular rich lode of gold was discovered on Father's Day 2018 at a location in the A-zone Main Shear on 15th level. In the space of two days, gold to the value of \$40M was mined. The specimen gold shown to us on slides included metre-long quartz samples with up to 44% Nat Au in volume - not in weight which would correspond to a much higher percentage.

Why should we preserve specimen gold? Firstly, the value of gold as specimen gold is much higher than the value of gold counted only in ounces. Secondly, specimen gold has educational value and should be preserved for display and scientific studies. Such discoveries are very rare. Beta Hunt specimen gold could be the foremost examples of specimen gold in Australia. It is worth preserving specimens as part of

the WA mineral heritage.

Editor's note – a stunning specimen from the Father's Day find can be viewed at the Perth Mint.

PERTH GEM AND MINERAL SHOW – 14-16 October 2022

The PGMS is almost upon us! With over 250 tables sold it will be bigger and better than last year.

What you need to know:

- Tickets for the day event are on sale via [eventbrite](#)
- we are still looking for volunteers, please register your support with kylie at pgms@minsocwa.org.au
- there is a call for mineral donations for the auction – Charities to choose from this year are [Kanyana Wildlife](#), [Street Friends WA](#), [Deadly Science](#) and [MinSocWA](#).
- Please be generous and use the form attached to the email
- Sundowner will be held at Camfield (Burswood) and will consist of nibbles, vegetarian paella, pork spit, lamb rolls, a variety of sides, wine and beer. Tickets are \$50 via eventbrite or this link: www.eventbrite.com.au/e/273949278667/?discount=PGMS1

We have an incredible line-up of sponsors, without which this event would not be possible. Please come along to support us and them!

For any further inquiries please contact us at PGMS@minsocwa.org.au

PGMS Organising Committee



[perth_gem_mineral_show](#)

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PGMS

Perth Gem & Mineral Show

Proudly presented by the Mineralogical Society of Western Australia

**14 - 16
OCTOBER
2022**

Become a part of WA's largest gem and mineral show for its second year running! Discover world class mineral specimens, faceted stones, fossils & jewellery, with interactive geoscience exhibitions & seminars.



Fathers Day Find
Beta Hunt Mine
Kambalda WA
45 x 45 x 70 mm
205 g



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Can you help with the MinSocWA table at PGMS?

If you have surplus books or journals or specimens (see example below about devil's dices), consider making them available at the MinSoc table as freebies.



Let's send our youngest PGMS visitors home with an extra smile! Peruse your drawers or those old boxes from a long-ago trip that are just gathering dust in the shed and consider donating some specimens to help young collectors along the way to become mineral enthusiasts,

NB please don't forget to provide a location; we do want to teach best practises!

Thank you in advance!



MinSocWA members Clive Daw and Tom Bateman have presented several boxes of iron pyrites pseudomorphs to the Society to be used as donations. With the forthcoming PGMS next month, many of these specimens will be packaged up as rewards for our young visitors who try out some of the mineral competitions.

The pseudomorphs were most likely collected from Cobra Station in the

Gascoyne region of Western Australia but, as the collectors have both been active in many field excursions over the years, the location is not fully substantiated.

Iron pyrite pseudomorphs are a common feature in many areas of WA and make interesting, easily collected finds. Simpson describes many of the occurrences in his second volume of *Minerals of Western Australia* under the chapter on goethite.

A preliminary inspection of the donated samples shows a wide range of sizes (4 mm to 30 mm cube sides), condition, crystal aggregations and form of individual pseudomorphed crystals (above).



One 30mm specimen shown sectioned (left) displays the cellular sponge-like texture of secondary iron mineral replacement throughout the specimen.



Overall, the development of these pseudomorphs has resulted from the alteration of an iron sulphide mineral to hydrated iron oxides, largely goethite but also a mix with hematite and other hydrated iron minerals. Colour of the specimens is largely brown, yellowish brown and also red. The microcrystalline goethite also forms thin mamillary linings within some cavities. Fundamentally what were crystals of iron pyrite are now preserved as goethite.

It is interesting to note that the original crystal growth features commonly seen in iron pyrite cubes comprising the striations across cubic faces at right angles on

different faces due to the combined cubic (100) and pyritohedra faces (210) have been preserved on many of the pseudomorphs (left).

Our thanks to both members for the donation.

Compiled by Susan Stocklmayer

COLLABORATIVE SIMPSON PROJECT – SUMMARY and UPDATE

Compiled by Susan Stocklmayer

Editor's note - the item below has also been circulated as a separate item from the Newsletter

Project Concept

During his career as Western Australia's Government Mineralogist, Dr Edward Simpson maintained detailed notes on those minerals he worked with. These were utilized to produce his major monograph, the definitive *Minerals of Western Australia*, that was completed by others after his death and published in three volumes in 1948, 1951 and 1952.

However, since the publishing of Volume 3 in 1952, well in excess of 400 minerals not previously described have been identified in Western Australia. This number continues to increase as more and more references are consulted.

In July 2020, a collaborative project was proposed to the members of MinSocWA in which all those interested were invited to prepare brief write-ups of those Western Australian minerals NOT described in the Simpson monograph. There was no intention to update the minerals in Simpson's published volumes. It was also considered best to follow the more relaxed style used by Simpson and not merely create an uninformative list of minerals.

A small operating committee was formed; a detailed template of relevant information designed; copies of necessary maps were supplied; details of significant databases given; an example of a completed report was added, and a very provisional time frame suggested. Those interested were requested to select their favourite mineral and start work. It was emphasised that it was essential that photographs are of Western Australian examples only, and that each photograph must include mineral names, locality, scale/FOV and a declaration that you have copyright or written permission to use (if not your photo).

It was accepted that this was a long-term project and one suggested date for completion was in 2025 — the 25th year of the founding of this Society. The nature of the final product was left open and would be decided when the project had advanced sufficiently.

Who was Edward S. Simpson?

Biography taken from Australian Journal of Mineralogy vol. 20(2).

Edward Stanley Simpson (1875 – 1939) obtained degrees from both the University of Sydney (BE in Mining and Metallurgy, 1895) and the University of Western Australia (BSc, 1914 and DSc, 1919). After working as a research chemist in New South Wales and as assayer in Queensland he joined the Geological Survey of Western Australia as a mineralogist and assayer in 1897, and became Government Mineralogist and Analyst in 1922.

Simpson's research was mainly in the fields of mineral chemistry, mineralogy and crystallography, and he was an authority on clays, rare minerals and on meteorites. His earlier work in Western Australia had involved rocks that hosted the chief gold deposits of the time, but perhaps his best-known scientific contributions were in connection with the rare radioactive minerals of the Pilbara and with the tantalum- and beryllium-bearing minerals.

During the 40 years of his professional career, he published over 100 papers and monographs on scientific subjects culminating in the publication of *A Key to Mineral Groups, Species and Varieties* in 1932. He collected and systematically arranged every piece of fresh information on the State's mineralogy that came his way — both published and in the unpublished records of his laboratory.

Simpson intended to write another monograph, but this was not completed by the time of his death on 30th August 1939. The manuscript was completed in 1942 under the supervision of Harry Bowley and Edward de C Clarke, using the data assembled by Simpson or available at the time of his death and was subsequently published as the three volume *Minerals of Western Australia* (1948, 1951, 1952).

Simpsonite, a tantalum aluminium oxide mineral with hexagonal habit, was discovered in 1934 and named after Edward Sydney Simpson by Harry Bowley in 1938. The type locality is the Tabba Tabba Main pegmatite (Tabba Tabba tantalum mine) located on Wallareenya Station in the Port Hedland Shire, in the Pilbara region of Western Australia.

The Mineralogical Society of Western Australia incorporates a simple drawing of simpsonite as part of its logo.



Progress and prognosis

Despite initial enthusiasm in which some 100 different minerals were “reserved” by MinSocWA members to write up, progress has been extremely slow with only 86 first-pass write-ups completed in around over 24 months with a further 15 in the pipeline. These are all in need of some editing, some requiring only a few corrections whilst others need major revisions.

The bulk of the work has fallen on the shoulders of a small group of people and it is obvious that the project, as first conceived, would not be satisfactorily completed within any predicted time frame.

So as not to waste the many hundreds of hours that have already been spent on this project it was decided to utilize the existing *Simpson WA project* webpage as the initial repository for the data.

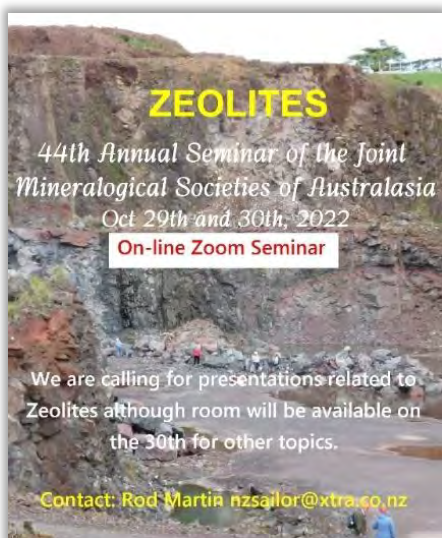
Existing reports will be lightly edited to ensure some sort of continuity, sorted in alphabetical order and then placed on the webpage. New mineral reports will be handled in the same way and added to the list.

All readers of the webpage will have the opportunity to offer editorial suggestions such as altering stratigraphic terminology; add further locations of an existing mineral; provide suitable photographs of WA examples and complete further mineral descriptions. This way, the database can steadily be corrected, updated and extended.

To get the ball rolling, we have selected 20 minerals that have been completed by the most active members. There are a further 80 minerals that require some form of editing before they can be added.

The *Simpson WA project* will be controlled by a small committee that will have the responsibility of incorporating all updates and additions. Hopefully, we will eventually have sufficient numbers of mineral descriptions to generate a more permanent product – either digitally or as hard copy.

Footnote: The WA mineral list can be emailed to anyone interested or searched from our website and a valuable contribution all members can make would be to read through the list and, if you are aware of additional minerals, please send in the information with the literature reference to: - simpsonwa@minsocwa.org.au.



44th Joint Seminar of the Mineralogical Societies of Australasia – October 29-30

For those willing to get together, the ChemCentre will again be our venue for listening to the talks from across the Tasman Sea.

For catering purposes, please respond to secretary@minsocwa.org.com to indicate if you are attending at the ChemCentre.

For those preferring to join in individually, please register your interest with Rod Martin at nzsailor@xtra.co.nz

Stay tuned for the program and time details!

QUIZ NIGHT – Monday, 21 November 2022

Hosted by Craig Bosel and Kylie Matonia @ The Herdsman Lake Tavern, Wembley, 6 to 9pm

This fun and social event is open to MinSocWA members, partners and extended family members over 16yrs of age.

Please plan to come early (6pm) to have a pub meal before the actual start of the Quiz at 7pm (see [menu](#)) – if enough people purchase a meal, the hire fee for the room will be waived and MinSoc

will get a considerable saving. It will be all over by 9pm but the space closes at 10pm if anyone wants to stay around afterwards.

Start chatting to other members and extended family now to form your 'tables of 6', or just turn up on the night and be allocated to a growing table. Entry is FREE.

All mobile phones be STRICTLY placed in the middle of each table and not used except if the babysitter rings you! 😊

Please send in your table team name [e.g. 'Rough Diamonds', whatever] with the names of the 6 team members to Craig at craig.bosel@westnet.com.au once you have a table figured out.

There will be a 1st prize of \$300 (per table), 2nd prize of \$150 (per table) and a Booby Prize of 6 bottles of wine. [P.S. The questions aren't as demanding as Vernon's ones below! 😊]

Quiz categories will be:

- | | |
|----------------------|-----------------------------|
| 1. General Knowledge | 6. Australiana |
| 2. Sport | 7. Perth and WA trivia |
| 3. Mineral Knowledge | 8. Geography |
| 4. True or False | 9. News and Current Affairs |
| 5. Movies | 10. History |

To get in the mood, why not have a go at this quiz compiled by Vernon Stocklmayer? Solutions will be circulated in the November Bulletin.



1. What is Edward Simpson's, Western Australian mineralogist, middle name?
a) Spencer; b) Stanley; c) Sydney; d) Did not have one.
2. Which of these is NOT related to coal?
a) Vitrain; b) Durain; c) Moraine; d) Fusain
3. The lunar mineral armalcolite gets its name from:
a) The names of the Apollo 11 crew **Arm**strong, **Ald**rin and **Coll**ins; b) the nationality of the people who first identified the mineral **Ar**menian, **Al**banian and **Col**ombian; c) The main elements **ar**gon, **al**uminium and **co**balt; d) none of the above
4. Which of these minerals does NOT form at ambient Australian temperatures?
a) Gypsum; b) Ikaite; c) Acanthite; d) Halite
5. Which of these is the heaviest?
a) An ounce of feathers; b) An Asian ounce; c) An ounce of gold; d) An ounce of lead.
6. The Cullinan diamond, the largest gem quality diamond found, weighed approximately (in carats)
a) 2,723; b) 4,051; c) 3,107; d) It was a fake.
7. The town of Norseman was named after Hardy Norseman, a ?
a) Prospector; b) Explorer.; c) Horse; d) Aboriginal tracker
8. One of these minerals is NOT named after a Western Australian mineral identity?
a) Fowlerite; b) Woodallite; c) Wadeite; d) Priderite.

9. The first Western Australian vertical mine shaft, started in 1846 and known as Cole's Shaft was where?
a) Ajana; b) Armadale; c) Albany; d) Bullsbrook.
10. Which of these gold nuggets is from Western Australia?
a) The Poseidon; b) The Hand of Faith; c) The Normandy; d) The Kum Tow.
11. The first recorded discovery of diamonds in Western Australia was at?
a) Fitzroy Crossing; b) Nullagine; c) Halls Creek; d) Marble Bar.
12. What year did the **average** annual price of gold first exceed US\$1000/ounce?
a). 1983; b) 2010; c) 1997; d) 2017.
13. Which of these minerals is NOT named after a Pastoral Lease?
a) Ashburtonite; b) Moolooite; c) Noonkanbahite; d) Muccanite
14. In the year 2020, which mineral commodity paid the greatest amount of royalties to the Western Australian Government?
a). Nickel; b) Copper; c) Lithium; d) Alumina.
15. Spherical, elliptical, button and dumbbell are all shapes of what?
a). Diamond inclusions; b) Native gold nuggets; c) Tektites; d) Cyanobacteria (blue-green algae).
16. Which is NOT a common type of twinning of quartz?
a) Japan Law; b) Roman –Dutch Law; c) Brazil Law; d) Dauphiné Law.
17. Purple gold is an alloy of gold and what?
a) platinum; b) cobalt; c) aluminium; d) silver
18. Who was Western Australia's first Government geologist?
a) Ferdinand von Sommer; b) Edward Hardman; c) John Forrest; d) Gibb Maitland.
19. Möganite was first described from the Canary Islands. What animal are the islands named after?
a) Aggressive wasps; b) Yellow birds; c) Large dogs; d) Whistling frogs.
20. Ernie nickelite, named after a well-known MinSocWA member was first found at?
a) Widgiemooltha; b) Siberia; c) Paynes Find; d) North Pole
21. Which of these Western Australian minerals is NOT a beryllium mineral?
a) Bavenite; b) Bertrandite; c) Bobierite; d) Bityite
22. The Telfer gold mine is located within which desert
a) Tanamai; b) Great Sandy; c) Gibson; d) Simpson
23. One of these films does NOT star James Bond (007)
a) Goldfinger; b) GoldenEye; c) The Gold Rush; d) The man with the golden gun
24. Who was the first President of the MinSocWA when it was formed in 2000.
a) Jeffrey Manners; b) Peter Clark; c) Jim Goldacre; d) John Reeve
25. Which of these Hamersley iron ore towns is the farthest north?
a) Tom Price; b) Newman; c) Paraburdoo; d) Pannawonica
26. Which of these minerals does NOT occur in the Poona emerald deposit?
a) Ruby; b) Topaz; c) Euclase; d) Alexandrite
27. Where are thrombolites NOT found?
a) Lake Clifton; b) Lake King; c) Lake Thetis; d) Lake Richmond

28. What gemstone is supposed to keep you from getting drunk.
a) Diamond; b) Amethyst; c) Emerald; d) Tried them all but none work.
29. What would you NOT find in an underground mine?
a) Dummy; b) Grizzly; c) Horse; d) Wolf
30. Which one is still recognized as a valid mineral by the IMA?
a) Fuchsite; b) Fayalite; c) Lepidolite; d) Sphene
31. Which is the densest metal?
a) Osmium; b) Plutonium; c) Platinum; d) Mercury
32. Which rock band recorded "Lucy in the Sky with Diamonds"?
a) The Rolling Stones; b) Abba; c) The Beatles; d) Herman's Hermits
33. Which of these minerals is the hardest?
a) Moissanite; b) Beryl; c) Pyrite; d) Corundum
34. The copper wedding anniversary is celebrated after how many years?
a) 12; b) 7; c) 23; d) 17.
35. The first recorded gold nugget in Western Australia was found at?
a) Coolgardie; b) Halls Creek; c) Albany; d) Cue
36. Where is alexandrite found in Western Australia?
a) Yinnietharra; b) Dowerin; c) Catlin Creek; d) Pippingarra
37. Where in WA was the first petroleum exploration well drilled in 1902?
a) Dongera; b) North West Cape; c) Warren river area; d) Noonkanbah station
38. Which of these is NOT a REE (rare earth element)?
a) Cerium; b) Europium; c) Erbium; d) Zirconium
39. An easy one after our mineral sands mine visit. Which is the most valuable?
a) Leucoxene; b) Rutile; c) Ilmenite; d) Zircon
40. How many carats in a gram?
a) 24; b) 3; c) 5; d) 12.5.

VALE Des Lascelles



Our long-time member Des Lascelles passed away in July, after a long battle with oesophageal cancer.

Des graduated from London University in 1964 with BSc Honours in Geology and spent five years with the De Beers Group exploring for diamond, tin and nickel in West Africa and Australia. He researched weathering of ultramafic rocks (Fifield magnesite deposit) and completed an MSc in economic geology at Macquarie University.

Des worked in a variety of exploration and mining fields, including tin, nickel, copper, chromium, tungsten and lead/zinc, partly as a self-employed consultant/contract geologist. He spent over 30 years in the iron ore industry, mainly in the Hamersley region where he contributed to the discovery and evaluation of the Hope Downs deposit and the Ferro Gully North Mine, and on Archean BIFs in the Yilgarn Craton (Koolyanobbing iron, Mount Gibson magnetite deposit).



Des teaching MinSoc members how to clean minerals in 2019.

On his retirement in 1998, Des enrolled at The University of Western Australia to carry out research on the origin of BIF and in situ enriched iron ore deposits. He has authored and co-authored several papers and one book on this topic. He was awarded his PhD in 2007 and for some years he was an Adjunct Research Fellow at the Centre for Exploration Targeting, University of Western Australia until recently.

Des had been a staunch supporter of MinSocWA, a constant presence at our Society events, and always approachable and eager to share his considerable knowledge of minerals and geology of WA. He has contributed to organising field trips (including a recent a visit to the Koolyanobbing iron mine – BIFs and iron ores were one of Des' main interests), has presented at Society's seminars and meetings, and was truly a member of our community.

Des was one of nature's gentlemen, an enthusiastic Society member who bore his illness with stoicism and dignity. He never complained about what he was going through but often the first to volunteer his time for the Society. He has donated his body to medical research and his collection to MinSocWA.



A memorial service in his memory was attended by a few MinSoc member (see image above of MinSocWA President Peter Willems delivering Des remembrance).

Photos of MinSoc activity and memorial courtesy of Allan Hart

UPCOMING EVENTS

Fri 14 to Sun 16 October – Perth Gem and Mineral Show 2022 – see above

Saturday 29 and Sunday 30 October – New Zealand Seminar, virtually @ the ChemCentre

Wednesday, 9 November 2022 – Talk *New Zealand - The place where greenstone grows* (NB Title TBC) by Francine Payette

**Monday, 21 November 2022 – Quiz night, hosted by Craig Bosel and Kylie Matonia
venue: The Herdsman Lake Tavern, Wembley, 6 to 9pm**

EXTERNAL EVENT – [Gems, Rocks and Craft Sale](#) @ the Lapidary Club – 29-30 October

Upcoming Field Trip – Date TBC

Due to operational unforeseen circumstances, the one-day access to the Whim Creek operations (see [Whim Creek Project - ANAX Metals Limited](#)) has been postponed to a future date.

Please note the points below nonetheless:

- The field trip is open to financial members only. We are checking mine site access for junior members.
- There is no limit to the number of participants
- Participants will have to make their own way to the site, which is located approximately 120 km east-southeast of Karratha
- There is no guarantee of any wulfenite or other findings, but we have grabbed the opportunity to visit the site
- There is no plan to extend the field trip beyond this visit.



NEW MEMBERS, MEMBERSHIP AND MEETINGS

The Mineralogical Society of WA would like to welcome Stuart Jeffries as a new member.

All members are asked to ensure that all your contact details are up to date with the Secretary. If you change your email address or phone number, please let us know so that you continue to receive all MinSocWA communications. Membership forms can be downloaded from the MinSocWA web page here: www.minsocwa.org.au/membership.

2022 – 2023 Membership renewals

Membership of the Mineralogical Society (MinSocWA) is open to anyone with an interest in minerals, mineralogy, fossils, gems, geology and related topics. Amateurs and earth science professionals alike are welcome, as are students, junior members and simply anyone with a desire to learn more about minerals — no prior knowledge of mineralogy is required. Membership must be ratified by the Committee.

Pay your annual renewal fee to the Commonwealth Bank:

Account Mineralogical Society of WA Inc.
BSB 066 124
Account 10168786

Do not forget to put YOUR NAME and CONTACT DETAILS in the transaction reference.

22nd AGM

President report

Thank you for coming to our 22nd Annual General Meeting.

This is my first report as President, after a change at the helm of the Society at the 2021 AGM. I'd like to acknowledge both past president Sue Koepke and the committee members that provided continuity and support during this transition. As well as those members that despite not sitting on the MinSoc committee do actively work towards our goals as a Society.

It has certainly been a busy year!

Undoubtedly, the **inaugural Perth Gem and Mineral Show** (PGMS) held in mid-September 2021 has been the highlight for the society. We had more than 3000 visitors to the show, a very successful charity auction (over \$15,000 donated to four charities, and more than \$3000 to MinSocWA), engagement from visitors of all ages, talks, kids' activities, and excellent support from sponsors. All this required a lot of hard work behind the scenes, and I'd like to congratulate the PGMS committee on their achievements. We are well under way with preparations for the 2022 PGMS, with over 240 tables booked (140 in the inaugural event).

In the past year, some of our activities have been impacted by the ever-present COVID-19 pandemic. This restricted participation to some of our talks for visitors and the ability to organise excursions to mine sites. Hopefully, things will improve from now on. Despite such restrictions, we have been able to have our **regular bi-monthly talks and activities for all members**. The talks covered quite a variety of topics from some excellent speakers:

September 2021	Niels Dahl	Minerals from Mary Kathleen, Queensland
November 2021	Dr Kailah Thorn	Preventing Pandora's box: the dos and don'ts of mineral curation and care
January 2022	Dr Tara Read	DMIRS Abandoned Mines Program
March 2022	Nicolas Hébert	Orange fluorescent minerals from Mogok, Myanmar: from the scapolite – feldspathoid bearing marbles to hackmanite
May 2022	Prof. Aaron Cavosie	The unique mineralogy of Australian meteorite impact craters
July 2022	Craig Bosel	The mineral EPIDOTE
August 2022	Nicolas Hébert	Energy and climate through the lens of a geologist

Our activities included:

- August and February Meetings of the Simpson Project group
- September Perth Gem and Mineral Show
- October Joint Mineralogical Societies of Australasia seminar (Hosted by MinSocNSW via Zoom, with gathering at the ChemCentre – thanks to Kari Pitts for coordinating the venue)
- December and May Mineral market (May postponed from April due to COVID restrictions at the venue)
- January Pizza @ Craig's place
- January, March and July Silent auction of donated items (e.g. Australian Geographic donated by Kaye Mulligan) and library surplus
- February Visit to Desert Fire Designs workshop
- June Introduction to GeoVIEW.WA

Work on the collaborative **Simpson Project** continues under the stewardship of Angela Riganti, and Vernon and Susan Stocklmayer, with 11 minerals currently being written up and first drafts of 89 minerals completed and now requiring editing. New species are regularly added to the WA mineral list, at a greatly reduced rate, and the total now is 403 - at the start of the project that total was approximately 300. So that the efforts of contributing members and the many hours of work involved can be acknowledged, the

working group is currently assessing the feasibility of a pre-release of a subset 100 mineral species and is hoping a decision/consensus will be reached soon.

Largely due to access restrictions because of COVID, only one **field trip** took place in November. The visit to collect gold at Donnybrook was followed by mineral separation at Clive Daw's place. We are still looking for members to assist in organising a longer trip for 2023.

A kids' activity and participation to the *Get Into Resources* event did not eventuate, as no volunteers were found to assist with organisation and coordination. We are hoping to be able to do this next year.

But a sincere, big thank you goes to all our speakers, field trip and activities coordinators who so generously gave their time and energy to educate and entertain us.

Several **changes to our modus operandi** were introduced in the last 12 months:

- The format of the bi-monthly gatherings. We discontinued the general meetings before the talks, as they were not enticing to visitors, were not a constitutional requirement, took up committee members' time, and with membership numbers increasing they captured only some of the members' views.
- Instead of general meetings, we have introduced a Show & Tell time before the talks that allows us to focus on minerals rather than the running of the society. We have also introduced virtual delivery of our talks that (after a few hiccups) now allows our remote members and those unable to attend in person to still listen to the talks. For this reason, it was decided not to introduce a country/regional membership category. Entrance to the talk is now free. Unfortunately, the LapClub setup may still take a while to be updated.
- To facilitate communications, instead of a bi-monthly Newsletter, we now have a quarterly Newsletter plus a monthly Bulletin. The Newsletter focuses on past events, the Bulletin on upcoming ones. Thank you to all who have contributed reports, articles, snippets of information, and of course to our editor Rod Berrell for putting them together.
- In addition, all committee members can be contacted at any time, and committee meetings are open to any member who may wish to present a special request.
- We have reduced the number of mineral markets, as PGMS takes up a lot of time and provides access to a wider audience, and we envisage to hold only one about half-way through the year from the show.
- We now subscribe to Rocks & Minerals and the Mineralogical Record, and these magazines are available on loan from our library.

Recently we said farewell to one of our members, **Des Lascelles**, who very generously donated his time and knowledge to the Society and helped organising the recent trip to Koolyanobbing. He also donated his collection to MinSocWA. Part of this (WA specimens) will be retained, and part used for the PGMS auction. **Clive Daw**, another long-time member, has also donated his sizable ore and rock collection to MinSoc. This requires careful sorting and assessment and is currently being shifted to Mark Creasy's Farm. Two certificates of appreciations will be presented to past members **Ken Ireland** and **Ted Fowler** for their past contributions to MinSocWA. I also take this opportunity to thank Mark Creasy, our patron, for his support of the Society and PGMS.

Decisions made about the purchase of **microscope equipment** were revised at a special general meeting in November. Jason Bennet is looking at some options. The Society will clearly benefit from having its own venue, where such equipment could be made more freely available. This cannot easily be achieved in the short term, but the committee would like to start assessing options in a more systematic way in the coming years.

During the 2021/22 financial year, our membership increased from 78 to 98, and I thank the various committees for their dedication and great work in getting the Mineralogical Society of Western Australia to where we are today. Some renewals are still trickling in, and our current membership stands at 78.

With a growing Society, it is important to keep offering an engaging program of talks and activities, and I call on every member to provide suggestions for speakers and events, but especially to volunteer their support and contributions to the running of the Society (there are many things you can do!) – this will make the work of the MinSoc volunteer committee a bit easier.

Peter Willems

MinSocWA President, 2021-22

Treasurer report — Financial Year 2021-2022

The balance in your Society's bank account at 30th June 2022 was \$65,924.39.

This is an increase in funds of \$3,556.06 during the financial year.

Major income items were:

Membership	\$3,441.70
Door Takings	\$ 662.50
PGMS	\$42,770.64

The PGMS takings include \$33,745.64 from the inaugural 2021 PGMS and \$9,015.98 from the 2022 PGMS.

Major Expenditure items were:

Website and domain maintenance	\$798.00
Catering	\$526.14
Capital Expenditure (Computer)	\$1,684.00
Insurance	\$3,212.46
PGMS (2021) Expenses	\$36,546.96

By far the largest impact on your Society's finances was the PGMS which produced a net profit of \$19,098.20. Much of the surplus cash from the PGMS accrued in the 2020-21 financial year.

Current issues

Your committee is undertaking a review if the Society's insurance costs, which, compared with clubs of similar size, seem excessive.

Now that interest rates are on the rise, your committee is looking at ways to invest surplus funds to the benefit of the Society.

The purchase of a suitable microscope is still under review.

Outlook

With a promising start to the 2022 PGMS, the financial outlook for your Society is very promising indeed.

John Mill

MinSocWA Treasurer, 2021-22

Income and Expenditure Summary Statement 1/7/2021 - 30/6/2022				
Opening Balance 1/7/2021				\$62,368.33
Income				
	Auction Takings			\$285.00
	Donations			\$46.00
	Door Takings			\$662.50
	Membership Fees			\$3,441.70
	PGMS Income			\$42,770.64
	Sale Day Tables			\$180.00
		TOTAL		\$47,385.84
Expenditure				
	Bank Fees and Charges			\$42.19
	Catering			\$526.14
	Computer Purchase			\$1,684.00
	Gifts			\$226.00
	Hall Hire			\$425.00
	Insurance			\$3,212.46
	Postage/stationery			\$108.41
	PGMS Expenses			\$36,546.94
	Subscriptions			\$260.64
	Website and Domain			\$798.00
		TOTAL		\$43,829.78
Closing Balance 30/6/2022				\$65,924.39

Many thanks to Ida Newton, Peter Willems and Niels Dahl who organised tea and wine for the evening. And to all those that contributed to tea and door prize donations through the year.

Ida Newton was the lucky winner of the door prize, an aragonite specimen from Spain.

Meetings - Meetings of the Mineralogical Society of Western Australia Incorporated are usually held from **6.30pm on the second Wednesday of every odd month** at the WA Lapidary & Rock hunting Club rooms at 31 Gladstone Road, Rivervale (corner of Newey Street). A Show & Tell, refreshment and socializing are followed by a talk starting around 7.30 pm.

The Society's microscopes, UV lamp and refractometer are available for use by members.

COMMITTEE MEMBERS FOR 2022/2023

President	Peter Willems	president@minsocwa.org.au
Vice President	Susan Stocklmayer	
Secretary	Angela Riganti	secretary@minsocwa.org.au
Treasurer	John Mill	treasurer@minsocwa.org.au
Field Trip Leader	Vacant	fieldtrips@minsocwa.org.au
Newsletter Editor	Vacant	newsletter@minsocwa.org.au
Committee Member	Kylie Matonia	
Committee Member	Niels Dahl	stormpfan@gmail.com
Committee Member	James Sherborne	jamessherborne@hotmail.com
Committee Member	Nicolas Hebert	
Committee Member	Frank Doedens	

Patron - Mark Creasy

MinSocWA LINKS

Web: <http://www.minsocwa.org.au>
Facebook Group: <https://www.facebook.com/groups/minsocwa>
Facebook Page: <https://www.facebook.com/MINSOCWA>
Instagram: <https://www.instagram.com/MINSOCWA>
YouTube Channel: <https://www.youtube.com/channel/UC0S2TFVFIBLU-2zlEzE5VNA>
