



Mineralogical Society of Western Australia Inc.

*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.*

Newsletter - January 2020

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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

EDITORIAL

Welcome to 2020 and may this new year and new decade be all you want it to be. As a Society I hope we can continue to evolve and grow and stand by our mission statement:

'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.'

You may remember that our logo had an update at the time of hosting the 42nd Joint Mineralogical Societies of Australasia Seminar in 2019 as part of the Seminar's promotional effort. The reason for this was to more accurately depict the crystallographic form of Simpsonite which is represented on the logo. Simpsonite was discovered in 1938 and named after Edward Sydney Simpson (1875–1939), government mineralogist and analyst of Western Australia. The year of incorporation of the Society was also added to the logo. A banner for the Seminar was made with the new logo and it is now used on our website, newsletter and other correspondence.

If any members have any requests or suggestions on what they would like to see in the newsletters please contact the Newsletter Editor. Contact details are on the last page of the newsletter.

Meetings

The General and Annual General Meetings of the Mineralogical Society of Western Australia Incorporated are usually held at **7.30pm on the second Wednesday of every odd month** at the WA Lapidary & Rockhunting Club rooms located at 31 Gladstone Road, Rivervale (corner of Newey Street).

At all meetings the Society's microscope and UV lamp are available for use by members.

RECENT ACTIVITIES

MEETINGS - General Meeting - Wed 13 November 2019

For full details of the meeting please refer to the Meeting Minutes.

An Ordinary Meeting was held on Wednesday 13 November and was chaired by President, Sue Koepke and was attended by 18 members and 2 visitors.

The November door prize was a glass plate kindly donated by Sue Koepke and was won by Des Lascelles.

We are always grateful to receive donated items for the door prizes. Please contact any of your committee members if you have suitable items you would like to donate.

Following the meeting John Mill gave a talk about Tucson, USA.

TALK - Wed 13 November 2019

John Mill gave a talk about his 2019 visit to The Tucson Gem and Mineral Show. The talk was supported by interesting and informative photos and titled "**It's not just about the Tucson Gem and Mineral Show**". For a full summary of what was included in this talk please see the last issue of this newsletter.

MINERAL MARKET - Sun 10 November 2019

The public mineral market day was held at the premises of the WA Lapidary & Rockhunting Club in Rivervale. Doors opened at 8.30am for sellers to set up and 9am for visitors and closed at 2pm. The day raised \$134 for the Society.



*A busy market day hall full of sellers and buyers.
(Photo credit: Angela Riganti)*



GAAWA INFORMATION EVENING - Wed 27 November 2019

The Western Australian division of the Gemmological Association of Australia held an Information Evening on Wednesday 27th November at Gemmology House in Cottesloe for anyone interested in studying any of their range of gemmology programs available from short one day courses through to Diamond Grading or a Diploma in Gemmology. The evening was open to members of the public and an invitation was also sent to MinSocWA members.



*At Gemmology House
(Photo credit: GAA of WA)*



WORKSHOP - Micro-mounting - Sun 1 December 2019 (10am-3pm)

Alan Longbottom conducted another of his very informative workshops on the processes involved in micro-mounting small mineral specimens. Members were invited to bring any specimens they wanted assistance with and to show any specimens that they found on the recent field trip.

Alan brought 5 microscopes, a range of equipment, tools and mounting requirements, as well as various mineral specimens. Twelve people attended including Alan and Joy Longbottom, Clive Daw and Ted Fowler who were all demonstrating different aspects.



SCHOOL OF ROCK - DR ROBERT MADDEN

Dr Robert Madden is an avid science communicator writing small geology vignettes, geology stories and educational resources on his social media account “School of Rock”.

This segment of our newsletter shares some of Dr Madden’s incredibly interesting articles and photos.

You can follow Robert’s ‘School of Rock’ for more geoscience content on Instagram @drrhcmadden.

Editor’s note: I asked Dr Madden if he would please write something about the mineralogy of meteorites as there has been a lot of new research recently revealing more about these fascinating specimens. I know that it is an area of great interest to him and I thought that members may also be interested. Dr Madden only writes about specimens he has personally seen and he takes all his own specimen photos.

Mundrabilla Meteorite

‘The Mundrabilla Meteorite’ refers to a group of Octahidrite (iron + nickel) meteorites that belong to the ‘Mundrabilla Fall’ of meteorites recovered on the Nullarbor Plain of WA. The date of the fall is unknown but a total of 24 tonnes of this meteorite have been recovered since the first piece (around 112 g) was collected in 1911 by a member of the transcontinental railway survey. The largest mass of this meteorite weighs in at 12.4 tonnes and is the largest meteorite ever found in Australia. Pictured here is a 617 kg mass held at the Australian Museum in Sydney.



Dr Robert Madden with a 617kg specimen of Mundrabilla Meteorite on display at the Australian Museum in Sydney, NSW

This meteorite contains a diverse mineralogical make up. Approximately 65% of this meteorite is an iron-nickel alloy with the remainder comprising troilite, schreibersite, graphite and silicates such as olivine, pyroxenes and plagioclase. Recently, the Mundrabilla has revealed that it is notable for hosting newly discovered superconductors; materials that conduct electricity without any resistance. Conventional superconductors consist of simple metals, such as niobium, lead, or mercury, which become superconducting when cooled to below a characteristic “critical temperature” close to absolute zero (0 K; -273.15°C). The requirement for supercooling of superconductors makes their application to modern technology both difficult and expensive.

Using a range of magnetic techniques and x-ray spectroscopy a team of Physicists at the University of California, San Diego discovered a naturally occurring superconductor within the mineralogy of the Mundrabilla Meteorite composed of an indium-tin-lead alloy. Although this superconductor is already well known finding it naturally occurring in a meteorite demonstrates that superconductors are ubiquitous in the universe and perhaps contain the potential for superconductors that do not require supercooling to operate. Meteorites are formed in temperatures and pressures that cannot be replicated in laboratories and so the hope is that meteorites may yet reveal to us new compounds that could lead to technological breakthroughs such as levitating trains.



The superb 617kg specimen of Mundrabilla Meteorite on display at the Australian Museum in Sydney, NSW



*Dr Robert Madden
Sedimentology research in Namibia.*

Dr Robert H.C. Madden has been looking at rocks and minerals for the last 17 years. Robert's specialities lie in carbonate sedimentology and petrology as well as exploration geology, particularly porphyry-epithermal and MVT systems.

He is also a Fellow of the Geological Society of London and a Member of the Australian Institute of Geoscientists with a rich, global portfolio of geological experience.

Robert is an avid science communicator writing small geology vignettes, geology stories and educational resources on his social media account "School of Rock".

You can follow Robert for more geoscience content on Instagram @drhcmadden.

YOUNG ROCK COLLECTORS & SCIENTISTS



This section is designed for our younger rock and mineral enthusiasts to be educational, fun and spark an interest in Earth Sciences in young minds.

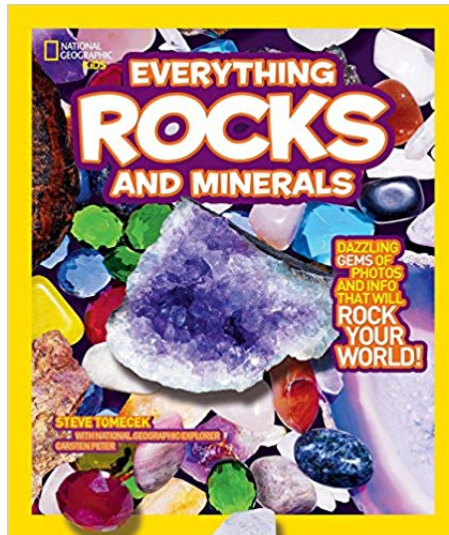
To welcome 2020 we are running a competition with a really cool prize for the winner.

THE PRIZE:

**Book – Everything Rocks and Minerals
(A National Geographic Publication)**

WIN!

WIN!



WIN!

WIN!

“Targeted to rock-crazy kids, this bold book is more energetic, more visually exciting, and more fun than anything else on the market—and with more information, too! Youngsters become geology experts as they browse eye-popping photos and absorb layers of information made extra fun through a humour-infused presentation.”

WHAT YOU NEED TO DO TO ENTER:

Draw or paint anything you like that inspires you in the world of rocks, minerals, mineralogy, volcanoes, meteorites, geology or fossils and write a short paragraph to go with it about why it inspires you.

SEND YOUR ENTRY TO: The Secretary, MinSocWA, 6 Rodgers Court, Roleystone, WA, 6111 or give it to a MinSocWA member to give to a member of the committee. **Include your name, age and a contact phone number.**

ENTRIES CLOSE: 5PM on 19th February 2020 (that gives you plenty of time to complete)

Entries must be received by closing date and will be judged and one winner selected by the committee of MinSocWA. The winner will be notified and mentioned in the next edition of this newsletter. The decision of committee is final. Entries may be collected after judging.

*Prize donated jointly by **Lesley Daniels**
and **Reeds Prospecting Supplies***



INTERESTING ARTICLES

No articles were submitted by members for this edition of the newsletter so I have selected a couple of articles I read recently that other members may find of interest.

Title: An impact melt origin for Earth's oldest known evolved rocks (Idiwhaa Tonalitic Gneiss impact melt)

Link: <http://www.crystal-world.com/wp-content/uploads/2018/11/Idiwhaa-Tonalitic-Gneiss-impact-melt-2018.pdf>

This Nature Geoscience article was shared by Thomas Kapitany to a Facebook page that he manages.

Title: Student discovers unusual new mineral inside a diamond

Link: <https://phys.org/news/2019-09-student-unusual-mineral-diamond.html>

If any members have any interesting articles they would like to share with other members through the newsletter please email your submission to Lesley Daniels (Newsletter Editor) at lesleydaniels777@gmail.com.

MINERALOGICAL SOCIETY OF WA LIBRARY

The Mineralogical Society of WA library comprises numerous books, reports and journals that have been donated by members. Currently there are over 150 publications housed in a lockable cupboard in the WA Lapidary & Rockhunters Club premises. To access the books please see the Librarian, John Mill. Members are encouraged to borrow books from our library. Donations are also appreciated. Please see John Mill if you have any publications you would like to donate to the library.

The Mineralogical Society of WA receives a complimentary copy of the Australian Journal of Mineralogy (AJM). These journals cover a wide spectrum of articles on mineralogy, ranging from descriptions of new minerals to book reviews, museum news and items of general interest to mineral collectors. MinSocWA members are regular contributors to the AJM.

Angela Riganti has sourced **Minerals of Western Australia (Vol 1-3) – Edward S. Simpson (Hesperian Press)** for addition to our library. The three volumes were donated to MinSocWA by the DMIRS. They were originally donated to the DMIRS library from the Finucane library (KJ Finucane being a past employee of the Aerial, Geological and Geophysical Survey of Northern Australia). As the DMIRS library already has copies of these volumes, they agreed to pass them on to MinSocWA for storing in their library.

Thank you to Angela for organising this very important addition to our library and to the DMIRS for their donation.

The MinSocWA Committee is interested in adding the following books to the library:

- **A Guidebook to the Pegmatites of Western Australia - Mark Ivan Jacobson**

If anyone has a copy that they would like to donate or sell to the library please email Librarian, John Mill at millrock@iinet.net.au.

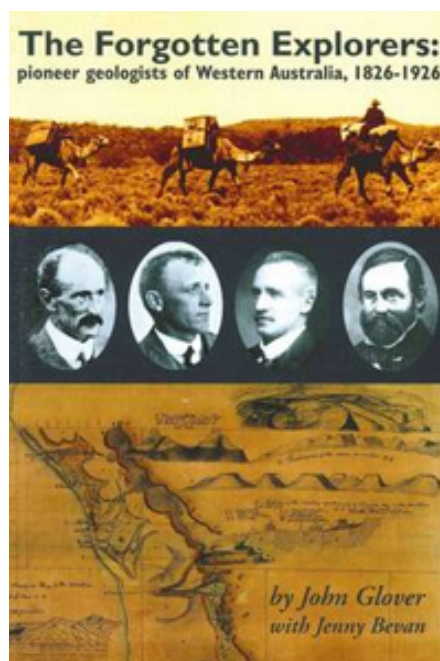
FEATURED LIBRARY BOOK:

The Forgotten Explorers: pioneer geologists of Western Australia, 1826 - 1926

Authors: John Glover with Jenny Bevan

Date Published: 2010

Publisher: Hesperian Press



Who were the great Australian explorers?

Most people immediately think of men like Burke and Wills, Giles, Sturt, Grey, Stuart, Leichhardt, Kennedy and Eyre: and it is true that, besides their achievements, all of these suffered great hardships, and some perished, making them more memorable historically.

However, in Western Australia, during the first century of settlement, there were other explorers, largely unknown, who traversed equally dangerous and desolate regions, but they were resolute and skilled bushmen who did not perish, become lost, or have to be rescued. They returned without fuss or acclaim, to write reports and get ready for their next journeys. There were, of course, a few colourful characters associated with this saga, and we look closely at them too.

Western Australians, and to a certain extent, Australians generally, owe much of their present prosperity to WA's energy and mineral resource sectors. The ground breaking work done by these "forgotten explorers" (and the small band of outstanding laboratory scientists who supported them) laid the basis of our present knowledge.

This book is the first to give brief histories of all the main geologists who worked in this early period, and mentions many others who had connections, albeit to a lesser extent, with the vital work of investigating the geology, landforms, soils and resources of Australia's largest State.

(Description credit: Hesperian Press)

If you like this month's 'Featured Book' from our library please borrow it and enjoy it.

Missing Library Publications:

The following publications are still missing from the Society's library.

Could all members who have borrowed books please check to see if you have any unreturned books you may have forgotten to bring back.

Copper Mines and Minerals. Joint Mineralogical Societies of Australasia, 31st Annual Seminar, 3rd - 7th November 2008, Zeehan Tasmania. Pope M, Bottril R. 2008. State Mineralogical Society of Tasmania.

Russian Alexandrites. Schmetzer K. 2010. Schweizerbart Science Publishers: Stuttgart.

The Australian Geologist: Newsletter No 93, December 20, 1994. Geological Society of Australia Inc.

The Australian Gemmologist Vol. 24 No. 6 April-June 2011. The Gemmological Association of Australia.

UPCOMING EVENTS - MEETINGS & ACTIVITIES

MEETING - General Meeting - Wed 8 Jan 2020

The door prize for the January meeting will be a Specular Hematite specimen from Koolyanobbing kindly donated by Des Lascelles.

TALK - Nicolas Hebert - Wed 8 Jan 2020

'Mineralogy of the gem-bearing marbles of SE Asia: a journey from Luc Yen to Mogok'

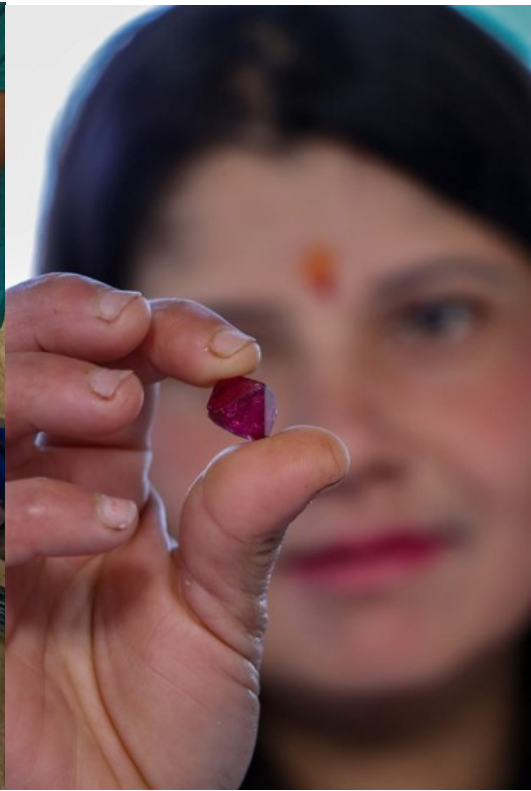
The Luc Yen area in Vietnam and the Mogok stone tract in Myanmar (formerly Burma) share similar mineralogy. While the most well known "pigeon blood" rubies may steal the show at first sight, there are several other mineral species worthy of interest. Splendid specimens of corundum, spinel, apatite, and pargasite on marble matrix are known by collectors worldwide, but highly diverse geological environments ranging from mafics to skarns and mica schist to pegmatites offer additional topaz, garnet, diopside and peridot, zircon and rare-earth minerals within a restricted area. Beyond offering an extensive insider view of the variety of the crystals mined there and the reasons behind their occurrence, this presentation will also cover the legal, logistic, financial, human and hand-on aspects of leading such a field expedition.

About the speaker:

Nicolas HEBERT is a graduate geologist currently working FIFO at Dalgaranga gold mine (WA). Following graduation late Sept 2018, he took a gap year and spend 7.5 months in SE Asia, collecting samples of ruby/sapphires from Chantaburi in Thailand and across the Cambodian border in Pailin. Field expeditions included zircon and gem albite deposits in Easternmost Cambodia (Bokeo in Ratanakiri province), visits to abandoned sapphire mines in Houei Xai (N Laos) and Kanchanaburi (W Thailand). Nicolas is a passionate collector who got started in France with numerous day-trips to Mont Blanc massif (smoky quartz, pink fluorite) and Vosges massif (Ba, F, Cu, Mo, Fe-Mn, Au) which host several medieval workings.

Seeking to get started in the mining industry, Nicolas landed in Perth in November and got a job in two weeks.





This talk will be held at the WA Lapidary & Rockhunting Club rooms located at 31 Gladstone Road, Rivervale (corner of Newey Street) following the General Meeting.

Members of the public are very welcome to attend. Door charge is \$3 for MinSoc members and \$5 for visitors and includes tea/coffee and light supper.

WELCOME TO 2020 - Sat 18 Jan 2020 (From 6pm)

Susan and Vernon Stockmayer have very kindly offered to host this event to welcome in the new year at their home at 13 Cameron Close, Lesmurdie from 6 pm on Saturday 18th January. Please bring a plate to share and anything you would like to BBQ for yourself. The Stockmayer's little furry bandicoot friends love peanuts in the shell if you would like to surprise the little marsupials with a treat.

Please RSVP to Susan and Vernon at baobab46@dodo.com.au by 12th January.

WORKSHOP - Refractometer & Specific Gravity - Wed 12 Feb 2020 (7.30pm)

Susan Stockmayer will be conducting a workshop on the processes involved in using a refractometer and how to measure specific gravity. Please bring any specimens you would like to test.

The workshop will be held at the WA Lapidary & Rockhunting Club rooms located at 31 Gladstone Road, Rivervale (corner of Newey Street).

The usual door charge of \$3 for members applies. Tea and coffee will be provided. Please contact Lee Hassan at lee_notebook@msn.com by if you will be attending.

MEETING - General Meeting - Wed 12 Mar 2020

The General Meeting will be held at 7.30pm at the WA Lapidary & Rockhunting Club rooms located at 31 Gladstone Road, Rivervale (corner of Newey Street).

The Society's microscope and UV lamp will be available for use by members.

TALK - Munich Gem Show - Wed 12 Mar 2020

MinSocWA member, Craig Bosel, will talk about his visit to the Munich Gem Show after the General Meeting.

MINERAL MARKET DAY - Sun 15 Mar 2020 (9am-2pm)

The next Mineral Market Day will be held in our usual venue of the WA Lapidary & Rockhunting Club rooms. Any members wanting to book a sales table please email the Secretary, Lee Hassan at lee_notebook@msn.com. Cost of a sales table is \$5.

WORKSHOP - Basic Mineral Identification for Children (Date TBC)

If there are any young enthusiasts who would be interested in a fun and educational children's workshop on '**Basic Mineral Identification**' please register your interest with the Secretary, Lee Hassan at lee_notebook@msn.com and we will endeavour to schedule this fun and educational workshop into our upcoming events calendar.

NEW MEMBERS

The Mineralogical Society of WA would like to welcome the following new members:

- Brett and Holly Roelofs

Current membership to date now stands at 61 members.

COMMITTEE MEMBERS FOR 2019/2020

President	Sue Koepke	0417 990 688	minsocwa@hotmail.com
Vice President	Angela Riganti	9243 7472	tormalina@bigpond.com
Secretary/Treasurer	Lee Hassan		lee_notebook@msn.com
Field Trip Leader	Peter Willems	0467 040 409	pjwillems90@gmail.com
Newsletter Editor	Lesley Daniels	0432 322 659	lesleydaniels777@gmail.com
Committee Member	Vernon Stocklmayer	9291 9043	baobab46@dodo.com.au
Committee Member	Susan Stocklmayer	9291 9043	baobab46@dodo.com.au

Patron - Mark Creasy

LINKS

MinSocWA Web: <http://www.minsocwa.org.au>
MinSocWA Facebook Group: <https://www.facebook.com/groups/minsocwa>
MinSocWA Facebook: <https://www.facebook.com/MINSOCWA>
MinSocWA Instagram: <https://www.instagram.com/MINSOCWA>

ADVERTISING

Members may submit short advertisements free of charge. Additionally, commercial advertisements will be accepted for a nominal charge. If you are interested in submitting an advert to the newsletter please contact the Newsletter Editor, Lesley Daniels.

ADVERTISERS



367 Great Eastern Highway, Midvale

Perth, Western Australia

(08) 9250 3388

Web page: www.reedsprospecting.com.au

Facebook: www.facebook.com/ReedsProspectingAustralia

Prospecting & Mining Equipment and Geology Training Courses

Reed's Prospecting Supplies was established over 30yrs ago as a supplier of equipment for gold prospecting. Reeds has grown over the years and now proudly offer Australia's largest gold and treasure detector hire fleet. As a certified Minelab dealer, you will find the largest product range for prospecting and small mining operations, available both in store and online.

Whether you are looking for advice on what equipment to use on your next prospecting project, or are after a quote on the purchase or hire equipment, their team of experienced and passionate prospectors are on hand to provide their detailed working knowledge of the product range. Leading this expert team of prospectors is Aaron Raddock, an experienced exploration geologist, with 25 years of experience working for multinational mining companies on global exploration projects, throughout Australia and Western Australia and as a consultant geologist for small and medium gold companies.

On top of an extensive range of equipment and specialist advice, Reeds Prospecting Supplies also offers a range of training courses including courses in advanced prospecting methods, how to read and interpret geology maps, as well as how to use and manipulate modern prospecting software such as Geomap and Google Earth. Contact the team at Reed's Prospecting Supplies to find out more about the training courses on offer.
