

MURRAYLANDS GEM & MINERAL CLUB INC. (MGMC) Incorporation No: A24186

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Summer Edition 2014/2015

Murraylands Gem & Mineral Club News

Editorial

What's So Special In The Next Edition?

Diary Dates

2015

- April 3rd, 4th, 5th & 6th, 2015. National Gemboree, Horsham, VIC.
- May 1st to 3rd, 2015.
 Murraylands Gem and
 Mineral Club Rockarama
 'Crystal and Craft Fair"
 incorporating SA Metal
 Detecting Championships.
- June 20th to 21st, 2015.
 Tea Tree Gully Gem and Mineral Club Exhibition (Biennial).

In this edition...

- Editorial
- What's So Special In The Next Edition?
- Competition Reports, Competition Schedule for 2015, and Other Bits.
- Workshop.
- Mineral Matters Barite.
- Extracts from Jeff's Fossil Journal 'Believe it or not'.
- Club Members Out and About
- Christmas Tea
- Club Committee, Sub-Committee and Meeting Schedules.
- Members Notice Board.
- Useful Internet Links.

Wow! What a busy quarter this has been. In keeping with the theme of enjoying social events as much as the mineral and craft aspects of the hobby, we have quite a picture gallery to present in this edition.

Before heading off to Glen Innes for the National Facetors Guild Seminar, Doug organised: a club trip to the Planetarium; the Riverland Gem and Mineral Club extended weekend stopover to our clubrooms; and the Don McColl presentation on 'Meteorites of Henbury'. See Doug's seminar report and his and Leonie's New England District (NSW) fossicking exploits in 'Out and About'. One of their photos appears below on this page titled 'Overlooking the town of Bingara'. They both caught up with some of us later at the 'Rock-on Gem and Mineral Show' at Broken Hill.

The array of activities covered by the picture gallery also includes:

September 6th and 7th 2014

Mildura & District Gem and Mineral Club Show attended by Maurice Burt.

September 14th 2014

Fieldtrip to Mannum Waterfalls; not all saw the giant 'Granite Man', but I did even if I didn't realise it at first. His photo is included in the gallery.

October 3rd, 4th & 5th 2014

The Broken Hill Mineral Club "Rock-on Gem and Mineral Show", Penrose Park, Silverton, NSW and two days of fieldtrips afterwards - see photos taken by Doug, Leonie, Alan and Gerri.

October 6th to 13th 2014

Woolcunda Station - Bush camping and fossicking fieldtrip

October 17th to 20th, 2014

Riverland Club Palmer Stopover and Don McColl presentation.

November 15th, 2014

MGMC Christmas Tea.

Regards, Mel Jones

A Mineral Matters, Four Part, Quartz Extravaganza is in the next Quarterly Newsletter - 2015 Autumn Edition.



Quartz var. Amethyst, Mt Gee, Flinders Ranges, SA.



Quartz - Arkaroola Bore, Flinders Ranges, SA.



Quartz - Ashton Quarry, SA.



Quartz - Bundaleer, Spalding, SA



I found these fossils at the Younghusband fieldtrip.



Overlooking the town of Bingara

The Murraylands Gem & Mineral Club Inc. is not and cannot be held responsible or liable for any personal injuries, loss or damage to property at any meeting, fieldtrip or activity organised by or on behalf of the club.

Murraylands Gem & Mineral Club Incorporated, Collier Park, Palmer, South Australia.

Competition Reports, Competition Schedule, and Other Bits

Summer Competition Results

Sep 10th 2014

Minerals:

Juniors - 1st Tahlia.

Novice

1st Tahlia.

2nd Maurice.

3rd Angie.

Open - 1st Don.

Micromount - no entries.

Fossils:

1st Courtney.

2nd Angie.

Field trip:

No entries.

Metal detecting:

1st Kym.

Novelty:

1st Don.

2nd Angie.

 3^{rd} Courtney.

Brag Corner:

1st Maurice.

2nd Maurice.

3rd Angie.

Oct 8th 2014

No competition due to meeting cancellation.

Nov 12th 2014

No competition due to AGM.

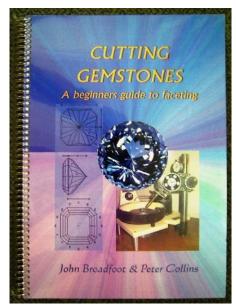


Don's 'Dream Time' rock.



Sonya's 9am Club Room 'Dream Time'.

Club Reference Library Purchase



Doug purchased this reference book on behalf of the club whilst attending the Facetors Guild Seminar and Workshop held at Glenn Innes, NSW, in early September, 2014.

See 'Doug and Leonie's Trip Away' in 'Members Out and About', for a more comprehensive report.

MGMC Competition Schedule 2015

Open: 2 specimens, Novice: 1 specimen, Junior: 1 specimen. Micromount: 2 specimens

Fossil, Novelty and Field Trip: 1 article or specimen unless stated otherwise.

Native Element: Gold, Copper, Silver, Bismuth, Sulphur. Calcite Group: Calcite, Magnesite, Rhodocrosite, Siderite, Smithsonite.

Month	Mineral	Micromount	Fossil	Novelty	Metal Detecting
January	Overseas Mineral	As mineral	Any Fossil	Souvenir	2 Foreign Coins
February	Native Element	As mineral	Any Fossil	Stone Carving	A Sterling Silver Pendant
March	Double Terminated XL	As mineral	Any Fossil	Egg Cup	2 Bottle Tops
April	Copper Minerals	As mineral	Any Fossil	Bracelet	An Article of Gold
May	Broken Hill Minerals	As mineral	Any Fossil	Pair of Knitting Needles	Dog Registration Disc - Oldest
June	Craft Fair Best Buy	As mineral	Any Fossil	Jewellery or Cabochon	Article found in Metal Detecting Competition
July	Fluorite	As mineral	Any Fossil	An Old Tin	Most Unusual Item Found
August	Quartz var. Smoky	As mineral	Any Fossil	Model Car	Article Found Interstate
September	Calcite Group	As mineral	Any Fossil	An Old Bank Note	3 Australian Half Pennies
October	No competition a/c AGM	-	-	-	-
November	Favourite Specimen	As mineral	Any Fossil	A Candle	Article Made of Lead
December	No competition a/c X-mas	-	-	-	-

Workshop Saturday 15/11/2014



Doug, Don (looking on), Alan, and Maurice.



From the left - Maurice being assisted by Doug. From the right - Alan and Robyn in the background.



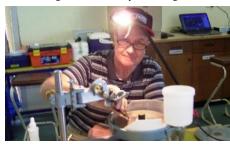
Maurice and Doug.



Don in his favourite corner.



Doug, Alan, and Robyn in background.



Maurice.



Janet - threading seed beads.



Maurice.



Doug assisting Alan with polishing issues.



Bronte.



Robyn.



Rex.



Robyn.



Maurice - running repairs



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A lady entered a jeweller's and said "You sold my husband a diamond ring yesterday, but it's the wrong size". "No problem madam, we can adjust the finger size easily". "Oh, you don't understand, you sold him a five carat size, and I take a ten carat size".



Sherlock Holmes and Dr Watson were on a fossicking, camping, and hiking trip. They had gone to bed and were lying there looking up at the sky. Holmes said, "Watson, look up. What do you see?"

"Well, I see thousands of stars." "And what does that mean to you?" "Well, I guess it means we will have another nice day tomorrow. What does it mean to you, Holmes?"

"To me, it means someone has stolen our tent."



Two men go on a fossicking trip. They buy all the equipment: the Miners Right, the gold detectors, the Blundstone boots, the maps, the 4WD, and even a two-man tent. They spend a fortune.

The first day they go fossicking, but they don't find anything. The same thing happens on the second day, and on the third day. It goes on like this until finally, on the last day of their vacation, one of the men finds a geode.

As they're driving home they're really depressed. One guy turns to the other and says, "Do you realise that this one lousy geode we found cost us fifteen hundred dollars?"

The other guy says, "Wow! It's a good thing we didn't find any more!"



Mineral Matters - Barite (South Australian focus)

Barite - extracted from:

http://www.pir.sa.gov.au/minerals/geological survey of sa/commodities/barite

Barite

Barite (barium sulphate, BaSO₄), the only commercial source of barium and barium compounds, is a relatively soft, inert mineral with a high SG (Specific Gravity) in the range of 4.2-4.5. Approximately 90% of world production is used as a weighting agent in drilling mud for oil and gas wells where the high SG assists in containing pressures and preventing blowouts. It is used as heavy filler in special paper, rubber, paint, and plastics applications. Its radiation absorbing properties are used in special concretes and in barium meals for medical X-ray examinations. Barium compounds are used in ceramic glazes and to enhance the brilliance and clarity of optical and TV glass. World production is ~6 Mt/year, onehalf of which comes from China. South Australia, with a current production of ~10 000 t/year, is Australia's largest producer.

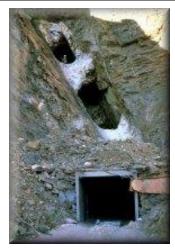
Over 160 barite deposits or occurrences have been documented in South Australia, with a total recorded production of 690 000 t. All but a few of these are of the open-fracture infill type hosted by Adelaide Geosyncline rocks in the Mount Lofty and Flinders Ranges. Deposits generally comprise steeply dipping tabular bodies up to 5 m wide which crosscut the enclosing sediments and metasediments.

Flinders Ranges

Many deposits in the Flinders Ranges are spatially related to diapirs, either as veins infilling fractures along steeply dipping diapir country rock contacts or radiating from diapirs. Over 400 000 t of barite have been produced from the dozen or so individual deposits associated with the Oraparinna Diapir including the only South Australian mines in current production at Oraparinna and Dunbar.

Oraparinna

Production commenced at Oraparinna, 500 km north of Adelaide, in 1940. Normandy Industrial Minerals, which operated the deposit from 1984, transferred the mine to Unimin Australia Ltd in 2000, continuing the mine's long history as Australia's largest supplier of industrial-grade barite. The mine, comprising seven underground levels, works a system of 1-2 m wide veins which have developed in tensional fractures within Adelaidean Wilpena Group sediments in a graben structure extending from the northeastern corner of the Oraparinna Diapir. Ore is trucked 160 km to a treatment plant at Quorn where three industrial grades of barite - A, Standard and B depending on colour, are produced for use in surface coatings, plastics fillers and mould coatings at Olympic Dam. Some A and Standard grade material is trucked to Gillman in suburban Adelaide for fine milling. 2002 production of 5248 tonnes is the largest since 1996.



Roberts lode No.2 level entrance portal, Oraparinna Mine. SA.

Dunbar

This deposit, formerly known as "Linke's Lode", is ~15 km southwest of the Oraparinna Mine and is worked by an open cut on a 30 m wide subparallel vein system ~500 m in length. Individual veins are up to 9 m wide. The ore is enclosed in a raft of Adelaidean sediments within the Oraparinna Diapir. Most Dunbar ore is used in the production of oildrilling grades of barite, but some is used to feed a magnetic separation plant at Quorn which produces a super-white AA industrial grade. Production has been historically high since 1997, totalling 11254 tonnes in 2002.

Other Deposits

Other smaller barite deposits which have been worked in the Flinders Ranges include those at Appealinna, Artipena, Carey Hill, Martin's Well and Mount John in the Blinman area, Mount Coffin (10 km east of Leigh Creek) and Mount James (30 km northwest of Beltana).

Mount Lofty Ranges

Numerous mines have been worked in the past but are now abandoned, such as at Julia Creek (72 km northeast of Adelaide) where 10 500 t of barite were produced from a number of small mines between 1925 and 1974.

The largest deposits were located in the Brachina Formation in an area 3 km south of Noarlunga. A total of 57 000 t were produced from four main workings between 1918 and 1961.

Small tonnages of high-quality barite were obtained from Woodside during 1978.

Other barite mines which have been worked out or abandoned include those near Athelstone, Uraidla, Prairie and Birdwood; two of the oldest mines are at Aldgate and Williamstown.

Olary District

Large, low-grade deposits in the Olary district occur at the same stratigraphic level within a banded iron formation in metamorphic rocks of the Willyama Supergroup.

The deposits are conformable with bedding of the country rock and are considered to be of sedimentary origin.

The barite is of drilling grade due to the presence of silica and iron oxide. The largest deposits are at Mount Mulga (21 km north of Olary) which produced 14 000 t of oil drilling grade between 1962 and 1980, and Walparuta (11 km northeast of Weekeroo Station) which produced 54 t between 1946 and 1954. Other occurrences are at Dome Rock, Waukaloo, Ameroo Hill and Meningie Well.

Eyre Peninsula

Mount Whyalla barite mine, 24 km northwest of Whyalla, was selectively worked over a distance of 1 km from a series of vertical lenses in the Pandurra Formation. Similar veins occur in the Moonabie Formation at Mount Laura overlooking Whyalla, and in the Burkitt Granite and Corunna Conglomerate at Corunna, 15 km northwest of Iron Knob.

A deposit of high-grade barite crops out adjacent to the manganese deposits on the floor of Pernatty Lagoon near the western shore. It forms a rise elevated 0.3 m above the general lake level over an area 6-12 m wide and is traceable for 500 m as a succession of patches forming a long, narrow lode.

Additional Reading

Hiern, M.N, 1976. Barite South Australia. *In*: Knight, C.L. (Ed.), Economic geology of Australia and Papua New Guinea, 4, Industrial minerals and rocks. *Australasian Institute of Mining and Metallurgy. Monograph Series*, 8:27-30.

McCallum, W.S., 1990. Oraparinna barite deposits. *In:* Hughes, F.E. (Ed.), Geology of the mineral deposits of Australia and Papua New Guinea. *Australasian Institute of Mining and Metallurgy. Monograph Series*, 14:1159-1161.

Valentine, J.T., 1989. Industrial and non metallic minerals operations in South Australia. South Australia. Department of Mines and Energy. Report Book, 89/74:3-11. (pdf file ~ 490kb).



Barite - Oraparinna, Flinders Ranges, SA.

Mineral Matters - Barite (South Australian focus)



Barite, Oraparinna Mine, Flinders Ranges, SA.



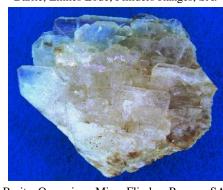
Barite, Kapunda, SA.



Barite, Linkes Lode, Flinders Ranges, SA.



Barite, Linkes Lode, Flinders Ranges, SA.



Barite, Oraparinna Mine, Flinders Ranges, SA.



Barite & Quartz, Bridge Road Quarry, SA.



Barite, Pernatty Lagoon, SA.



Barite, Linkes Lode, Flinders Ranges, SA.



Barite & Quartz, Bridge Road Quarry, SA.



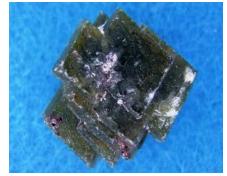
Barite, Pernatty Lagoon, SA.



Barite, Linkes Lode, Flinders Ranges, SA.



Barite, Stanley Mine, Clare, SA.



Barite, Kapunda, SA.



Barite, Linkes Lode, Flinders Ranges, SA.



Barite, Kapunda, SA.

Extracts from Jeff's Fossil Journal

Believe it, or not.

(Click on each hyperlink to access more details from the Internet).



In Canada in 1967 large skeletal remains were found on a beach in *Lake Winnipegosis*. These were also found around *Lake Okanagan*, *Lake Manipogo*, and *Lake Igipogo*. Many sightings indicate that the creature's size ranged from 20 to 80 feet in length.

Other sightings have occurred at *Cedar Lake*, *Fullars Bay*, *Dirtwater Lake*, *Lake Minitoba*, *Graves Point*, *Cranes Bay*, and *Manipoga*. All reported sightings were by reputable people, usually by several people at the time.



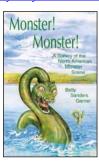
Click here to access, 'Ontario's Lake Monsters'.

Click here to access, 'OGOPOGO - Canadian Lake
Monster.'

Field Guide to Lake Monsters, Sea Serpents, and Other Mystery Denizens of the Deep By Loren Coleman.



Monster! Monster!: A Survey of the North American Monster Scene by Betty Sanders Garner.



Continued next column.

Believe it, or not.

Continued...



Crossing the ocean to Russia, where sightings have been in the *Tian Shan mountains*, *Piroda*, and *Lake Vorota*.

In 1953 soviet geologist, Dr V A Tverdokhlebov, leader of a prospecting party on the Sordong Plateau, East Siberia, Russia, reached the shores of *Lake Labinkir*, where to their surprise out in the lake a 100 metres away was a large creature swimming towards them. As it came closer they saw that this darkish creature had a 2 metre head and body of about 10 metres.

The nearest village is about 120kms away. On reaching the village, the party was surprised to hear that the villagers knew of the *Lake Devil*.

Previously it had taken several dogs and a sheep. Witnesses spoke of a reindeer, which was chased into the lake by a dog, suddenly and violently disappeared under the water. Seconds later the dog disappeared too!

These witnesses explained to the stunned party that the creature resembled a long necked *Plesiosaur*

Lake Labinkir is of thermal origin which could explain the creatures survival 'til now.

Extract by Fossil One.

Click here to access video, 'Tour to Lake Labinkir monster, Nessie's Cousin? '.

<u>Click here to access, 'Is Siberia's Lake Labinkir really</u> home to a monster?'.

Click here to access, 'Lake Vorota Beast'.

<u>Click here to access, 'The Siberian Times - So is there a Loch Ness Monster in Siberia?</u>

<u>Click here to access, 'The Monsters of Siberia'.</u>
<u>Click here to access, 'Russian Lake Monsters'.</u>



Click here to access, 'Investigating the unexplained: a compendium of disquieting mysteries of the natural world By Ivan Terence Sanderson'.

<u>Click here to access, 'Wikipedia List of reported lake monsters!'</u>

Click here to access, 'Global Lake Monster Database - Cryptozoology, Living Dinosaurs, and Origins.'.

<u>Click here to access, 'Legendary Lake Monsters</u> From Around The World'.



Valentin Petrovich Tverdokhlebov is head of the mapping teams and field expeditions branch of the Geological Institute at the University of Saratov, where he has worked since 1956. He graduated from the University of Saratov, and has since specialized in mapping the Permo-Triassic successions of the South Urals around the city of Orenburg. He completed his PhD in 1967 on the sedimentology and stratigraphy of the Permo-Triassic, focusing in particular on

the arid formations. From 1970 to 1973, he participated, as sedimentologist, on a number of expeditions to study the Early Cretaceous dinosaur beds of Mongolia. He was made Doctor of Science in 1996. He has published 100 scientific papers during his

The Ediacara Fauna of South Australia

This is a brief summary of a report by David Aslin.

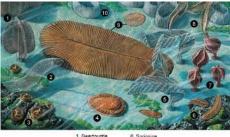
In 1947, an Australian geologist **R.C. Sprigg** reported the discovery of fossil jellyfish remains in the Flinders Ranges of South Australia. At that time it was believed that the fossils were of lower Cambrian age, but subsequently it has been determined that they are in fact Late Pre-Cambrian [Glaessner **1963**]. This age for the jellyfish fossils is now generally accepted, even though it is unlikely that the beds could be ever radiometrically dated because of the composition of the formation. Fortunately, in the Ediacara hills an unbroken stratigraphic sequence extends 500ft upwards from the 'jellyfish' bed to a dolomitic limestone containing the first undoubtedly Cambrian fossils, typical of the lowest strata elsewhere in the ranges.

The fossil remains are preserved in five different ways, the most common state being in the form of flattened convex cast. The other less common states of preservation found are counterpart mould, composite mould, counterpart cast, and external mould [Glaessner and Wade 1966]. These soft bodied creatures lived near or on the seabed and were stranded in the silty beds and subsequently became buried by shifting sands.

Up 'til 1965 around 1400 specimens of fossils had been collected from Ediacara, making this one of the richest of its type and age in the world.

By Fossil One

Reconstruction of the Precambrian Ediacaran Life - 600 Million Years - from National Geographic Magazine - April 1998 - Art: John D. Dawson



Phyllozoon
 Tribrachidium
 Kimberella
 Charnia

7. Rangea 8. Ptendinium 9. Dickinsonia 10. Ernietta

http://meta-gaia.angelfire.com/ediacaran_index.html

Doug and Leonie's Trip Away

Glenn Innes, New South Wales - Early Sept 2014

We headed to Glen Innes for the Australian Facetors Guild Seminar and workshops held at the start of September. The seminar was held at the Glen Innes Showgrounds which was the ideal venue. We had plenty of room for the caravans, a good meeting room where workshops were held, and the large pavilion was great for the seminar lectures and dealers. The home-made morning and afternoon teas as well as the lunches put on by the ladies of the Red Cross were enjoyed by all.



I attended a faceting workshop in the week prior to the seminar and learnt quite a few different techniques for faceting. And, in turn, I was able to share some of my knowledge with others there. It was interesting to see the wide variety of machines in use — we even had Brian and Liz from Gemcuts learning how to facet on the Omni and Patriot machines that they are the distributors for. A lot of discussion ensued as to which type of machine was best, my thoughts on that matter is the best machine is the one that you currently have!



While I was faceting, Leonie did a silver chain bracelet making course where she enjoyed the company of some of the ladies not involved in the faceting workshop, but happy to learn how to make a chain bracelet.



The Seminar had many lectures including some on the Geology of the New England area, Sapphire cutting, Skin polishing of sapphires, Care and maintenance of your laps, Orientating your gems for maximum yield and performance.



Yarrow Creek - Sapphires

Field trips were held over the week following the seminar where there was fossicking for Sapphire at Yarrow Creek and the Sara River, Smoky and Rutilated Quartz at Tinga, Quartz and Emerald at Torrington. While the material was not prolific we all got something to take home including some nice facetable coloured quartz.



Torrington - Emeralds.



Sara River- Sapphire, Quartz & Gold.



Doug looking for facetable quartz at Sara River.

A group of ten or so fossickers broke camp and headed to the Inverall area where we made a base camp at the Copeton State Water Park. Copeton Dam is the largest fresh water dam in NSW and its area is ten times that of the Sydney Harbour.

If you are looking for a location that ticks all the boxes, then this one would have to be it –

Continued next column...

plenty of space, nice clean amenities, hot showers, free golf course, fishing, and not forgetting the proximity to nearby fossicking locations.



Copeton Dam.



Campsite at Copeton Dam.

From our base camp at Copeton Dam we explored nearby Staggy Creek looking for diamonds – There was plenty of black shorl tourmaline and the occassional small sapphire in our sieves but the diamonds were few and far between. For the ten carloads who fossicked six diamonds were found. The diamonds are very small and purportedly some of the toughest diamonds in the world. This is due to the them being twisted internally somewhat like a knot in a tree.



Leonie supervising sieving for diamonds.



Staggy Creek looking and washing for diamonds (above and below).



Doug and Leonie's Trip Away

Glenn Innes, New South Wales - Early Sept 2014 Continued...



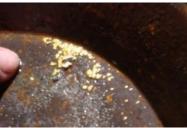
And, a diamond was eventually found

A day trip to Stannifer looking for jellybean quartz was very successful with many kilo's bought home to be tumbled. Some of the varieties found included lovely smokies, citrine and clear quartz - many facet quality.

A field trip to the Bingarra area looking for gold was also enjoyable although not much gold was found somenice serpentine and jaspers were dug up which when slabbed will be turned into nice cabochons.



Gold panning at Bingarra.



Here it is! Gold!



Happy hour after a day fossicking.

After a few weeks in this area we turned south to head to Broken Hill and the Gem Show at Silverton followed by a few days digging at Woolcunda. (see the reports on these elsewhere in this magazine)

The Facetors Guild seminar is being held at Glen Innes again next year in September I would encourage any members to join and have a fantastic time.

Good on you Maurice!



SPARKLE: Gem and Mineral Clubs Association of South Australia state president Maurice Burt, from Murray Bridge, shows off some calcite geodes

By Gabrielle McLeod

MILDURA'S annual gem show held over the weekend was a diamond in the rough.

The Mildura and District Gem and Mineral Club's annual exhibition at the Irymple Masonic Hall featured some of the finest and brightest rocks, crystals and gems, as well as million-year-old fossils.

Club members and dealers from around Victoria, NSW and SA exhibited their collections to more than 400 people

who attended the show on Saurday and yesterday.

Club secretary Hellyn Parker said despite crowd

numbers being down in com-

numbers being down in comparison to previous years, the show was again a success.

"It's gone very well. Yesterday was quite busy – there were quite a number of people through, including those who have travelled from as far as Melbourne, Mount Gambier and Geelong," she said.

"It's an isolated hobby, but we are pleased with the interest it has in the region."

This year's show saw six out-of-town dealers in attendance, in addition to club members who displayed their own collections.

Jan Krause, of Hamilton, travels throughout Australia

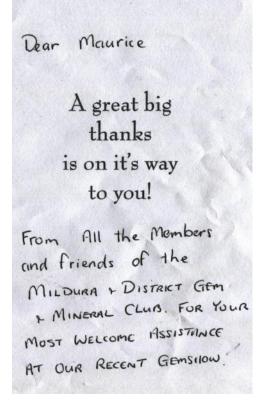
and New Zealand with a large collection of fossils. She said there was always interest from old and especially young in the million-year-old rocks.

"My interest in fossils began when I found one of the rarest shells in a creek a few decades ago," Ms Krause said.

"Since then I've been hooked. We have hundreds and thousands of fossils in our collection and it's only a hobby."

The Mildura and District Gem and Mineral Club has 33 members, who meet regularly, For further information on

ly. For further information on the club, contact Hellyn and Jeff Parker on 0408 502 340.



See Mildura & District Gem and Mineral Club Show photos contributed by Maurice next page...

September 6th and 7th 2014

Mildura & District Gem and Mineral Club Show attended by Maurice Burt - event photo gallery contributed by Maurice.



Well! What can one say?



Setting up - tedious, but necessary behind the scene work.



View from the other end.



Maximising the use of available rooms.



Lyell's woodcraft - great value.



Display of local lapidary work.



Amazing variety of colour and patterns.



A cross section of interests represented.



All setup - time to relax, have a chat, and share some experiences before customers arrive.



Jeff providing a customer with sound advice.



Lapidary demonstrations are interesting to watch and help to attract new members.



Maureen and Pauline resting between customers.



A steady flow of potential customers allows time to have a chat or explain some aspect of the hobby.

Tuesday, October 7th 2014

Maurice also contributed photos taken at the BHMC 'Rock On' Mineral Show Fieldtrip on Tikalina Station via Radium Hill Rd. SA. (These are restricted to the shearing shed quarters as Alan and Gerri's photos cover the fieldtrip four pages further on.)













Thank you Maurice for sharing your photos.

Saturday, September 6th, 2014. Club visit to the Adelaide Planetarium.











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Why couldn't the astronaut book a room on the moon? Because it was full.

When people run round in circles we say they're crazy. When planets do it, we say they're orbiting.

Extracted from <u>Adelaide Planetarium website...</u>
What is The Planetarium?



Experience the stars and planets at Adelaide's only Planetarium!

A planetarium is a room with a dome-shaped ceiling on which the nights sky is displayed through a star projector. The Adelaide Planetarium houses a Zeiss Jena ZPK1 star projector that displays an artificial night sky onto the eight metres diameter domed ceiling and can show the position of constellations, stars, and planets. The projector displays the relative position and brightness of about 5,000 stars that are visible from the Southern Hemisphere.

The Adelaide Planetarium is housed at the University of South Australia's <u>Mawson Lakes campus</u> on the second floor of Building P. This completely air-conditioned dome seats 45 people in our new specially designed chairs allowing the audience to view all parts of the artificial sky in ease and comfort.

The year 2012 was the 40th anniversary of the Planetarium, come and see the Southern Hemisphere night sky brilliantly recreated. An impressive 5,000 stars are projected onto our eight metres diameter dome ceiling.

Presentations at the Planetarium - The Night's Sky

The Night's Sky presentation spans 45 minutes - 1 hour and involves a demonstrator giving a live presentation about the solar system, stars and constellations and other interesting celestial objects found in the night's sky. Unlike other planetariums that simply project a movie onto the dome, the Adelaide Planetarium gives visitors the unique experience of a guided tour provided by a highly qualified presenter, who takes you on a journey into outer space.

You'll learn about the origins of star and constellation names, utilising indigenous as well as traditional star lore and mythology.

Night Sky presentations give an insight into the splendour of universe whilst being informative and educational. Visitors are encouraged to ask questions throughout the presentation allowing a large degree of involvement. Our presenters will also tailor the presentation to suit the audience so whether you are five or 85, there is something for everyone at the Adelaide Planetarium.



Star light, star bright First star I see tonight I wish I may, I wish I might Oh wait, it's just a satellite. Extracted from <u>Wikepedia - The Free</u> <u>Encyclopaedia...</u>



The <u>Sun</u> and <u>planets of the Solar System</u>.

Sizes, but not distances, are to scale.

The **Solar System** comprises the Sun and the objects that orbit it, whether they orbit it directly or by orbiting other objects that orbit it directly. Of those objects that orbit the Sun directly, the largest eight are the planets that form the planetary system around it, while the remainder are significantly smaller objects, such as dwarf planets and small Solar System bodies (SSSBs) such as comets and asteroids.

The Solar System formed 4.6 billion years ago from the gravitational collapse of a giant molecular cloud. The vast majority of the system's mass is in the Sun, with most of the remaining mass contained in Jupiter.

The four smaller inner planets, Mercury, Venus, Earth and Mars, also called the terrestrial planets, are primarily composed of rock and metal. The four outer planets, called the gas giants, are substantially more massive than the terrestrials. The two largest, Jupiter and Saturn, are composed mainly of hydrogen and helium; the two outermost planets, Uranus and Neptune, are composed largely of substances with relatively high melting points (compared with hydrogen and helium), called ices, such as water, ammonia and methane, and are often referred to separately as "ice giants". All planets have almost circular orbits that lie within a nearly flat disc called the ecliptic plane.

The Solar System also contains regions populated by smaller objects. The asteroid belt, which lies between Mars and Jupiter, mostly contains objects composed, like the terrestrial planets, of rock and metal. Beyond Neptune's orbit lie the Kuiper belt and scattered disc, linked populations of trans-Neptunian objects composed mostly of ices. Within these populations are several dozen to more than ten thousand objects that may be large enough to have been rounded by their own gravity. Such objects are referred to as dwarf planets. Identified dwarf planets include the asteroid Ceres and the trans-Neptunian objects Pluto and Eris. In addition to these two regions, various other small-body populations, including comets, centaurs and interplanetary dust, freely travel between regions. Six of the planets, at least three of the dwarf planets, and many of the smaller bodies are orbited by natural satellites, usually termed "moons" after Earth's Moon.



How do astronauts serve dinner? On flying saucers.

Field Trip to Mannum Waterfalls Sunday 14th September 2014.



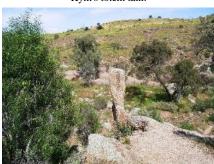
Hello, my name is 'Granite Man'. I'm the live-in giant, guardian of the 'Mannum Waterfalls'. I hereby give permission to MGMC to visit my home and highlight its features in the following picture gallery. Please visit me again sometime soon. Bye for now.



Watch your step - the gravel is slippery.



Kym's totem talk.



Subject of the talk - granite totem.



Are we there yet?



Looking east (downstream).



Looking west (upstream).



Not noticed by most - it's not just rock - it's a pegmatite reef with a large feldspar crystal showing.



Moving on.



Nearly there.

000

Q: What are the three rules of finding gold? *A: Mine, mine, mine.*



We are now there and in it as well.



Waterfalls - compare with the couple standing in the left foreground.



Downstream again and panning - no gold yet.



This is how it's done.



Still no gold - lots of black stuff though.

Penrose Park, Silverton, NSW. pm Friday 3rd to am Sunday 5th October 2014.



Penrose Park Hall for indoor trading.



Catering - including scouts (meat) & Maurice (hot chips).



Hall trading - (L) side Gus's stall.



BHMC's club stall.



Steady flow of customers to Ian's stall.



Janet serving MGMC's stall customers.



Greg and Petra's stall.



Tony and Wendy's stall.



Hall traders.



Barry's stall.



Chris, Doug, Mike, and Lynn at Ian's stall.



Doug and Lynn looking over the MGMC stall.



Powered trading sites.



John's stall.



Toby's stall.



Gerri and Alan looking over Greg's stall.



MGMC's club stall (Janet & Mel) next to Ian's stall.



Mel takes a break to photograph the pub - so he said!

BHMC 'Rock On' Mineral Show Fieldtrips, Monday 6th & Tuesday 7th, October, 2014 Fieldtrip to the Day Dream Mine

Fieldtrip to the Day Dream Mine



Doug and Leonie signing indemnity forms.



The field trip group.



Doug fossicking or 'day dreaming' on the mine dumps?



Such rugged landscape, such rugged characters!



Gerri with samples of malachite and azurite.



Whew! This hot and dry work - rocks are hot too!

Day Dream Mine fieldtrip continued... Photographs contributed by Leonie and Doug...



Chim...chiminee... see the chimney stack on the hill.



Danger! Deep shaft!



Forevermore retired!



Hello, I'm on a downward spiral. **Kyanite Fieldtrip on Tikalina Station via Radium Hill Rd.**

Photographs contributed by Gerri and Alan...



Tikalina - group meeting with Trev before departure.



Radium Hill museum.

Tikalina Station kyanite fieldtrip continued...



Follow that car.



Trevor and Gordie - BHMC Field Officers.



Trevor showing the group what to look for.



Gerri and Maurice.



Is it like finding a needle in a haystack?



Done with kyanite for now. Let's look for garnets...

BHMC 'Rock On' Mineral Show Fieldtrips, Monday 6th & Tuesday 7th, October, 2014

Garnets at Thackaringa

(Note: Some captions are fictitious - members are not) Photographs contributed by Gerri and Alan...



Getting the drum on garnets.



Keep a tight circle just in case there's Indians out there.



Maurice, "Is you in a niqab, or is you just incognito?"



Still looking.



Ah! See! Its Maurice 'two-hats' just sheltering from the sun's rays and what is he pointing at? Sorry guys, I have not checked as yet.

Alan and Gerri then proceeded South from Broken Hill to Woolcunda Station to indulge in digging for gypsum 'sand roses' with other members of TTGGMC, MGMC and 'Southern Rockhounds'. See their Woolcunda photos in the next column...



Doug and Mel provide a pilot service - entrance to Woolcunda Station homestead block.



Last gate entrance to gypsum fossicking area.



Earlier arrivals well settled in.



Alan hard at work.



Doug and Chris's neat hole.



Gerri you are making dust!



Mel and Leonie in search of scorpions.



They found one.



Chris's great find.



Gerri takes a breather.



Men hard at work



Home away from home.

Thank you to Gerri and Alan for sharing their experiences and interesting photographs.

Woolcunda Station, NSW. Pm. Sunday 5th to am. Friday 10th October 2014.



Ian preparing his Sunday evening meal.



Wendy prepares the baked potatoes.



Tony prepares the meat.



Warming up!



Look! 'Tis nearly a full moon!



And, then my flash exposed an explosion of moon shadows?



The blow-fly hovering in anticipation in the foreground of this picture must think that Mike is digging a toot-hole, but in reality he was simply digging an outer perimeter test hole; looking for the occurrence of outlying gypsum crystals.



Doug digging down, down and further down.



Ian's found colour in a new hole, but not very productive.



Gypsum specimens found by Ian in an earlier hole.



Alan and Gerri starting their first hole



Doug, Lynne, Joan, and Leonie taking a coffee break.



Janet preparing lunch ingredients; camp oven pasties.



Mel's third none productive hole, that is, until Ian opened up the floor to make it quite productive after all. See below...





Chris working carefully around a crystal cluster.



Chris and Alan in advanced and productive holes.



Clay wasp nest found by Mel in the first of his two unsuccessful exploration test holes. Looks very similar to the fossilised "Leptopius duponti" cocoons he found earlier in the year at Venus Bay. This nest was soft and consisted of

The highlight of each TTGGMC fieldtrip to Woolcunda Station is the social gathering to share individually prepared food. This year's event was supplemented with the moon being eclipsed by the earth while we sat and enjoyed our shared meals. The following picture gallery records this event. *Thanks Ian, once again, for bringing this altogether (eclipse...well!)*.



Ian preparing calamari with chillies - very nice!



Leonie setting the tables while under admiring scrutiny.



Mike and Wendy adding meal contributions - very nice.



Janet, Leonie, Gerri, Doug and Chris.



Leonie, Alan, Doug, Chris, Gerri and Lynn (centre front).



(L) foreground - Alan & Gerri. (R) foreground Mike & Pat

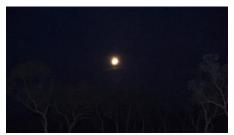


(L) foreground - Ian & Janet. (R) foreground Joan, Lynn, & Chris.



Wow! Have we overeaten?

Eclipse of the moon







Mike, Pat, tablet, and moon eclipse.

Eclipse of the moon Continued...



Moonstruck!



Nearly eclipsed.

Scorpion - a tunneling creature not uncommon in the gypsum field trip area. The largest seen by us in the area so far is about 2.5 to 3 x larger than these two specimens shown here. Located and photographed by Mel.





Scorpion's shelter tunnel.



Fossil Hunting Fieldtrip

On Saturday morning, 18th October 2014, Fossil One (Jeff) lead MGMC and RGMC members on a fossil hunting fieldtrip to the Younghusband district located between Mannum and Bow Hill, SA. The trip was well attended and all participants were rewarded with a variety of finds, including echinoids and some shark's teeth.

We thank Jeff for organising this fieldtrip.



Cars having a rest.



Careful it's slippery underfoot.



Alan.



Fossilised sharks teeth.



Fossil hunting postures. Michael, Leonie, Doug, Janet and Kaye.



Gathering of gathering ladies.



I found these.



Karen and Michael.



Another fossilised sharks tooth.



Jeff on the move...on his feet once more!



My collection of finds.



Spreading out...beware of tumbling objects!



Tea break - Janet and Kaye.



Jeff sharing his finds with Lyn.



Dennis on all fours after seeing Jeff's' adventure.

Younghusband River Red Gum Art

Date/Location: 2014-10-18 - Younghusband district along the River Murray between Mannum and Bowhill, SA.

Mel, while waiting for photo opportunities at a fossil fossicking fieldtrip with MGMC, was sitting in the shade of a long felled river red gum watching the enthusiasts digging and scratching for fossils when he noted the artistic appeal of the water worn and sun bleached grain on the felled tree. This gallery of pictures records what he saw.









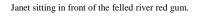






















Millendella Fieldtrip

On Saturday afternoon, 18th October 2014, Kym lead MGMC and RGMC members on a fieldtrip via Gap Road to the Millendella district located North of Palmer, SA. The trip was well attended and all participants were rewarded with a variety of finds, including Andradite (garnet) and massive Epidote. Neither, at this locality, is of gemstone quality.

We thank Kym for organising this fieldtrip.



Downstream view of Millendella Creek along Gap Road.



Upstream view of Millendella Creek along Gap Road.



Are we there yet? Yes, we are there right now.



Kym describing the area and what can be found.



Young ladies seeking more details.



Spreading out!



View across the hills - great picnic spot down there.



All eyes pointed down - Fiona, Ian, Kym and Karen.



Andradite (garnet) very dark green. Epidote lighter green.



Ian motioning Sonya with his ppp...pick.



Sonya has found some specimens.



Another Andradite and Epidote specimen.

Andradite Garnet

Extracted from: www.minerals.net/gemstone/andradite

Andradite is the most lustrous of the *Garnets* and has several gemstone varieties. The term Garnet describes a group name for several closely related minerals that form important gemstones, and Andradite is an individual member mineral of the Garnet group. Andradite is a common mineral but is usually opaque and not fit for gemstone use; the transparent gemmy forms are rare and valued. The term Andradite is strictly a mineral term and is rarely used in the gem market. The gem forms of Andradite are known by their variety names of *Demantoid*, *Topazolite*, and *Melanite*.

Uses: Andradite Garnets are not commonly used as gemstones. Demantoid was more popular in the 19th century, but its popularity has decreased because of its lack of widespread availability and low hardness. Topazolite is also seldom used in jewellery and is mostly faceted for collectors. With an increased interest of black gemstones on the market, Melanite makes a very good and inexpensive black gemstone, and is used in bracelets, rings, earrings, pendants, and beads.

Epidote

Extracted from: http://en.wikipedia.org/wiki/Epidote

Epidote varies in colour - green, grey, brown, or nearly black, but usually a characteristic shade of yellowish-green or pistachio-green. It displays strong pleochroism (colour varies with position) the pleochroic colors being usually green, yellow and brown.

The name is derived from the Greek word "epidosis" $(\epsilon\pi i\delta\sigma\sigma\iota\varsigma)$ which means "addition" in allusion to one side of the ideal prism being longer than the other. Epidote is an abundant rock-forming mineral, but one of secondary origin. It occurs in marble and schistose rocks of metamorphic origin. It is also a product of hydrothermal alteration of various minerals (feldspars, micas, pyroxenes, amphiboles, garnets and others) composing igneous rocks.

The perfectly transparent, dark green crystals from the Knappenwand and from Brazil have occasionally been cut as gemstones.

Here is our (Janet and Mel) Epidote found in the Entire Valley, Harts Range, N.T. and cut and polished by Murray Thompson in 1982.



Epidote from Entire Valley, Harts Range, N.T.

Don McColl's address, 'Meteorites of Henbury'.

8pm Saturday 18th October 2014 at the Murraylands Gem and Mineral Club Rooms, Palmer, SA. *Thanks Doug for organising this*.



Don McColl.



Presentation.



Question time.



Karen, Fay, Malcolm, Janet, Kaye and Leonie.



Dennis thanking MGMC for hosting RGMC.



Doug thanking Don on behalf of MGMC.



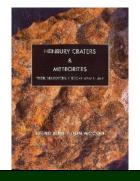
Don (foreground) examining a fragment cut from a suspected meteorite found by Gary Lewis (centre background).



Don's Henbury meteorite - example 1



Don's Henbury meteorite - example 2 (approx 9kgm)



Extracted from...

Wikipedia - Henbury Meteorite Conservation Reserve.

Henbury Meteorites Conservation Reserve is a protected area in the Northern Territory of Australia. The reserve is located 145 kilometres south west of Alice Springs and contains over a dozen craters, which were formed when a fragmented meteorite hit the Earth's surface.

Henbury is one of five meteorite impact sites in Australia with remaining meteorite fragments and one of the world's best preserved examples of a small crater field. [1] At Henbury there are 13 to 14 craters ranging from 7 to 180 metres in diameter and up to 15 metres in depth that were formed when the meteor broke up before impact. Several tonnes of iron-nickel fragments have been recovered from the site. The site has been dated to \leq 4.7 thousand years ago based on the cosmogenic 14 C terrestrial age of the meteorite [2] and 14 C terrestrial age of the meteorite fission track dating. [3]

The craters are named for Henbury Station, a nearby cattle station named in 1875 for the family home of its founders at Henbury in Dorset, England. The craters were discovered in 1899 by the manager of the station, and then went uninvestigated until interest was stirred when the Karoonda meteorite fell on South Australia in 1930.^[4] The first scientific investigations of the site were conducted by A.R. Alderman of the University of Adelaide who published the results in a 1932 paper entitled *The Meteorite Craters at Henbury Central Australia*.^[5] Numerous studies have been undertaken since.

Having noted the Wikipedia reference to the **Karoonda Meteorite**, I (Mel) checked the Wikipedia entry and was surprised at its proximity to where I grew up - read below...



As a point of interest, I grew up on the family farm that ran between Lowaldie (7 miles north east of Karoonda) and Borrika (approximately 12 miles north east of Karoonda) which means the meteorite fell approximately 6 miles from the family farm. I was born 16 years after the meteorite fell, but I don't recall any family elders talking about the incident apart from the obelisk and plaque being erected in Karoonda.

MGMC Fieldtrip to Tungkillo

On Sunday 19th October 2014, Ian Everard joined members of MGMC and RGMC on a fieldtrip from Palmer to a private property in the nearby Tungkillo district. The primary target for this fieldtrip was to find beryl, schorl and quartz crystals. Examples of each were found. This picture gallery records some of the activity, examples of specimens found, and people at the event. *Thanks Kym for this event*.



Doug and Ian at the indemnity signing desk, MGMC rooms.



Locals, "Mooo.....moooove you pesky fossickers!"



Kym outlining field conditions and rules for the area.



Kym showing example specimens to look for.



Ian and Kym tracing a line of interest.



John and Ian carefully chiseling around a beryl crystal.



Example of a beryl specimen found.



Across the creek and up the hill in search of schorl.



Patches of schorl were prolific, but well weathered. \uparrow





Sonya with a schorl and quartz specimen.



Isn't it good to see the fairer sex exerting themselves to look after their elders. These two photos by Sonya. (↑ above - Karen, Mel, Doug, and Fiona) (↓below - Karen, Doug, Fiona, and Mel)





Scene from the hill - note the locals under tree upper (R).



Youth group fossicking for tadpoles



Lunch time



Distant locals, "Mooooo...moooove...that's our water hole!"

MGMC Christmas Tea

Club Christmas Tea Saturday 15th November 2014



Teresa's treat.



Pick me! Pick me! Please - eat me! Please!



From the left - Sonya, Teresa, Don, Rubein, and Ian.



From the left - Leonie, Alan, Kim, Kym (standing) Geri (opposite Alan).



From the left - Michael, Coralie, Rex and Doug. From the right - David and John facing them.





From the left - Bob, Bev and Angie. From the right - Maurice and Janet facing them.



Everyone's favourite - sweets.



Rain, rain, rain more, and don't go away.



The rain washed out the cricket match on the oval, but next door they celebrated nevertheless - that's what a good shelter with an attached bar is for - rainy days, sunny days, any days, and more.

Christmas Tea Raffle



Main prize not displayed at the time of the photo.



Mel - 1st Raffle Prize winner. Lucky me!



Angie - 2nd Raffle Prize winner.



Maurice - 3rd Raffle Prize winner.



John - 4th Raffle Prize winner.



Christmas tree - joint effort of Bronte and Leonie.



Club Committee, Sub-Committee and Meeting Schedules

<u>Committee.</u>		Sub-Committee Leaders		2015 Meeting Schedule	
President: Ian Thorley:	Mobile: 0488 489 014	Building: Terry Mabbitt	Phone: 08 8531 3848	Committee At 2:00 pm on:	Club At 7:30 pm on:
Vice President Bronte Rowe	Phone: 08 8572 3320	Competitions: Kym Loechel Jeff Tonkin	Phone: 0427 054 336 Phone: 08 8531 1308	Jan 17 th	Jan 14 th
Leonie Hughes	Phone: 08 8278 2112	Faceting Doug Hughes	Phone: 0408 782 112	Feb 21 st	Feb 11 th
Minute Secretary: Angie Regnier	Phone: 08 8531 1047	Field Officers:		Mar 21st	Mar 11 th
Treasurer: David Laubsch	Phone: 08 8532 4828	Kym Loechel First Aid Lead:	Phone: 0427 054 336	Apr 18 th	Apr 8 th
Committee:	DI 0400 500 440	Kym Loechel	Phone: 0427 054 336	May 16 th	May 13 th
Doug Hughes Kym Loechel	Phone: 0408 782 112 Phone: 0427 054 336	Fund Raising: Bronte Rowe	Phone: 08 8572 3320	Jun 20 th	Jun 10 th
Public Officer: Jeff Tonkin	Phone: 08 8531 1308	Minerals: Mel Jones	Phone: 08 8395 1792	Jul 18 th	Jul 8 th
		Newsletter Mel Jones	Phone: 08 8395 1792	Aug 15 th	Aug 12 th
		Publicity Assistant: Jeff Tonkin	Email: mel.jones@bigpond.com Phone: 08 8531 1308	Sep 19 th	Sep 9 th
		Website Mel Jones	Phone: 08 8395 1792	Oct 17 th	Oct 14 th
		Work Shop	Email: mel.jones@bigpond.com	Nov 21st	Nov 11 th
		Rex Shillabeer Maurice Burt	Phone: 0429 322 339 Phone: 0437 090 621	Dec 19 th	Dec 9 th

Members Notice Board

Meeting Arrangements

General Club Meetings are held on the second Wednesday of each month; starting at 7.30pm.

Club Lapidary Workshops are held on the third Saturday of each month; starting at 9.30am.

Committee Meetings are also held on the third Saturday of each month; starting at 2.00pm.

Cancellations: The club secretary will notify members via SMS. Members need to ensure that the secretary has current phone numbers. Leaders cancelling workshops/meetings/activities need to give the secretary reasonable notice; preferably 24 hours notice or more.

Newsletter Content and Contributions

Contributions for the quarterly newsletter need to be passed on to me no later than two weeks before the start of March (Autumn Edition), June (Winter Edition), September (Spring Edition) and December (Summer Edition).

Contributions for the monthly club notes need to be passed on to me no later than the day before the relevant meeting.

As the current caretaker for the club website, I will be uploading the quarterly newsletters to the website, but not the "Monthly Club Notes". In addition, the photo/video gallery and notice board on the website will be updated when required. Please consider contributing some of your photos and videos for all to enjoy.

I look forward to your ongoing assistance and also seek your timely, frank feedback so that the newsletter continues to meet the club members' interest.

Regards,

Mel Jones 08 8395 1792

mel.jones@ bigpond.com

Urgently Wanted

$South\ Australian\ mineral\ photo\ opportunities.$

I'm looking for opportunities to photograph South Australian mineral specimens for future newsletter "Mineral Matters" articles.

Do you have South Australian minerals that you can make available to be photographed? I 'm prepared to take these photos at your nominated location or at the club rooms, whichever suits you.

The Autumn Edition of "Mineral Matters" will be about South Australian Quartz. Specimens do not have to be first prize winners - what matters, is that they are clearly identifiable, and present as a reasonable example from a known location.

Hope you can help me out on behalf of the club.

Regards,

Mel Jones 08 8395 1792

mel.jones@ bigpond.com

Useful Internet Links

2014 Australian (& some NZ!) Gem & Mineral Calendar: http://www.mineral.org.au/shows/shows.html

Australian Federation of Lapidary and Allied Crafts Association (AFLACA): http://aflaca.org.au//

AFLACA-GMCASA: http://aflaca.org.au/members/gem-and-mineral-clubs-association-of-south-australia-gmcasa/

Gem and Mineral Clubs Association of South Australia (GMCASA): http://www.gmcasa.org.au/

Adelaide Gem and Mineral Club: http://sacommunity.org/org/197578-

Adelaide_Gem_%2526_Mineral_Club#.Uta7ufRDt8E http://www.adelaidegmc.websyte.com.au/

Broken Hill Mineral Club, The: http://brokenhillmineralclub.wikispaces.com/

Enfield Gem and Mineral Club Inc: www.egmc.infopage.com.au

http://southaustralia.localitylist.com.au/yellowresult.php/goal/Detail/ckey/26988

Flinders Gem, Geology and Mineral Club Inc:

http://www.lapidaryworld.com/flinders_geology_gem_and_mineral_club.html

Minelab (Rockarama Metal Detecting Report - **Trevor Ferraresso**): https://www.minelab.com/treasure-talk/palmer-2013-another-successful-event

Miners Den - Trevor Ferraresso: http://www.minersdenadelaide.com.au/

Mineralogical Society of SA Inc: http://www.sa-minsoc.websyte.com.au/

Southern Rockhounds: Website - http://www.southernrockhounds.com.au/home

Facebook - https://www.facebook.com/SouthernRockhounds

Yorke Peninsula Gem and Mineral Club Inc: http://www.coppercoast.sa.gov.au/page.aspx?u=754&c=16913