

# Mineralogical Society of Western Australia Inc September 2010 Newsletter

## Editorial

Since the last newsletter there have been two new publications. Firstly the book "The Forgotten Explorers" (see description later in this newsletter), and secondly the long awaited volume 15 (2009) of the Australian Journal of Mineralogy. Investigations are continuing towards getting a microscope and camera for the society. Progress on this will be announced at the meeting. Thought is also being given towards what theme we should adopt for the 2012 annual seminar to be held in Perth. If you have any suggestions please contact a committee member. Contributors to the newsletter should submit articles at least a week before the next meeting. Late articles may be held over to the following newsletter.

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## October Meeting - Wednesday 6<sup>th</sup> October 2010

Starting at 7:30 pm at the WA Lapidary Club rooms 31 Gladstone Road Rivervale.

**Speaker: Sue Koepke**

**Topic: "Japan-law Twinning in Quartz"**

**Visitors Welcome.**

**Light refreshments provided after the meeting.**

## 2010 Future Meeting Dates

Wednesday 1<sup>st</sup> December 2010 Christmas Meeting

Speaker Margot Willing Topic to be announced

The next Joint Mineralogical Societies of Australasia 34th Annual Seminar will be held in Melbourne 11<sup>th</sup> to 13<sup>th</sup> June 2011. The theme will be "Mineralogy into the future".

More details in future Newsletters.

The 2012 Annual Seminar will be held in Perth.

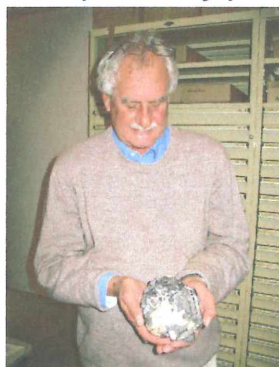
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### **Visit to WA Museum on 23 June 2010 by Sue Koepke**

In June, Alex Bevan and Peter Downes kindly accommodated a visit to the WA Museum's mineral collection in Welshpool by our small group of five members. As during our previous visit we were well looked after and had the opportunity to view selected mineral specimens to further our knowledge.

A particular highlight was to see in person several of the classic and historic specimens that were included in Alex Bevan's talk at the Joint Mineralogical Societies Seminar in Adelaide last month.

Another special treat was waiting for us in the paleontological section where we were shown the skeletal remains of the extinct marsupial lion. Alex gave us some background information on the significance of this important find and mega fauna extinction, and explained the teeth of the marsupial lion. More information on this find can be found on the WA Museum's website. All of us very much enjoyed our visit.



### **Ben Nicolson's Wedding (photos from Sue Koepke)**





## Report on the field trips following the seminar Annual Seminar in Adelaide by Allan Hart

This report is based on the talk that I gave at the August meeting. The number of photographs has been reduced for convenience (about 70 photos & maps were shown at my talk).

Organised field trips were a half day to Mount Malvern, Claredon, and a 3 day trip to the Olary Province (Paratoo and Mutooroo copper mines). At the last minute an alternative trip was announced to Toms Quarry for those not going on the Olary trip. Further to this the Mineralogical Society of Queensland organised some field trips around Broken Hill (these are also included in this report).

The field trip on the Monday after the seminar was to Mt Malvern, approximately 18 kilometers south of Adelaide (almost within the suburbs). Minerals found included azurite and malachite (see photos below), dendrites of manganese oxide, a small amount of galena as well as barite.



Dendrites, Mt Malvern



Azurite, Mt Malvern



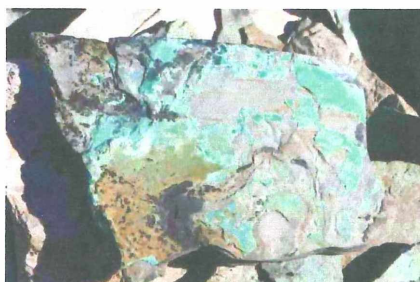
Azurite & Malachite, Mt Malvern

On Tuesday to Thursday there was a longer field trip to Paratoo and Mutooroo copper mines in the Olary district. Six vehicles containing 13 people (represented by the states SA, Qld, Vic, WA, and one person from New Zealand) met at Burra at about 10am before continuing in convoy to the Paratoo Copper Mine. Mainly malachite was found, although a few rare decrespignyite (a copper mineral containing rare earth elements) specimens were found. That night we had dinner at the Yunta Hotel. The meals were huge. Breakfast the next morning consisted of bacon, eggs & sausages with left over sausages and bacon placed on the table for people to help themselves. We then continued on to the Mutooroo Copper Mine and was joined by 2 more people. At Mutooroo there was mainly malachite in various forms along with some calcite. Additionally some people managed to find cobalto-calcite, native copper and cuprite. One person was using a metal detector to find native copper. The next morning we had a look at the old homestead, then returned to the site for more fossicking.

Thanks to Ashleigh Watt for organising these field trips. After that the South Australians (and the New Zealander) returned to Adelaide, while the rest of us continued on to Broken Hill. Steve Dobos had arranged with Trevor Dart for us to go on several field trips around Broken Hill.



Paratoo Mine

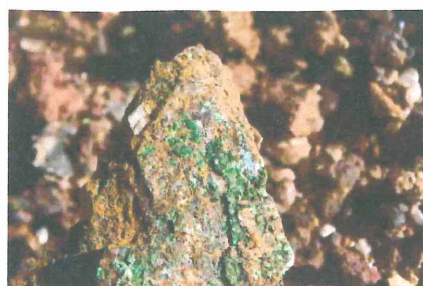


Malachite, Paratoo



Malachite, Paratoo





Malachite, Mutooroo



Malachite, Mutooroo



using a metal detector to search for native copper



Native Copper & Cuprite, Mutooroo

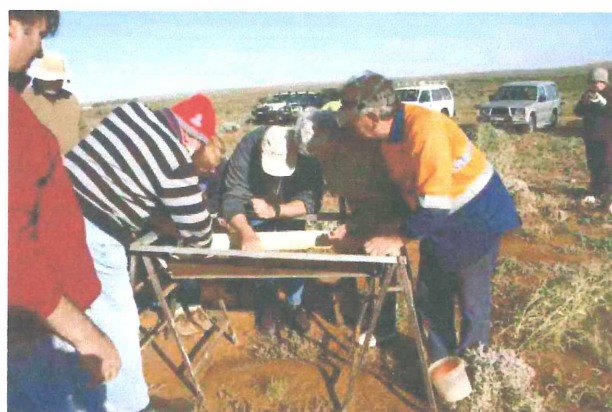


Calcite



The Group at Mutooroo Mine

On the Friday we visited several areas – Hidden Treasure Mine, Great Western Mine, Nine Mile South Mine and a scheelite deposit. All these sites were about 5 to 10 Km along the Broken Hill to Silverton Road. At the Hidden Treasure Mine we searched for and found gahnites. Gahnite is a zinc aluminium spinel ( $\text{ZnAl}_2\text{O}_4$ , compare to normal spinel which is  $\text{MgAl}_2\text{O}_4$ ), which occurs here as small black octahedral crystals (some of these are actually a very deep green), both loose and in matrix. Next we went to The Great Western mine where we found malachite and cerussite. The third location this day was the Nine Mile South Mine where we found more gahnite and also some garnets. The last location of the day was a scheelite deposit where everyone collected what they thought would be scheelite. We then returned to admire Trevor Dart's Collection which had a large section of Broken Hill minerals and a smaller section on minerals from other places. After dinner that night we checked the specimens which we suspected might be scheelite under a UV light – some of us were disappointed that some of the specimens that we thought were most likely scheelite did not fluoresce while other less likely specimens did fluoresce. Not everyone was convinced that all the minerals that fluoresced were scheelite.



Sieving for gahnites



Gahnite in matrix





Searching for Gahnite



Garnets

On the Saturday we went out to Thackaringa. The first stop was just beside the road where we collected material which probably originally came from the Triple Chance Mine (some beryl was found amongst this material). Next we visited several pegmatite quarries in search of more beryls, unfortunately, much of the beryl in quartz was very fragile, often breaking up as people tried to extract them from the rock. We then visited a location further north to look for garnets and staurolites. In one area there were small gemmy well formed garnet crystals lying on top of the ground just waiting to be picked up. Further away the garnet crystals were much larger but not as perfect and definitely not gemmy. Still further along was the staurolite deposit. Most of the staurolites were between 1 and 2 cm long and not twinned, although I do know of at least one which was 5.5 cm long. None of the staurolites had the familiar cross which people expect. However, we still had an enjoyable day.



The road to Thackaringa



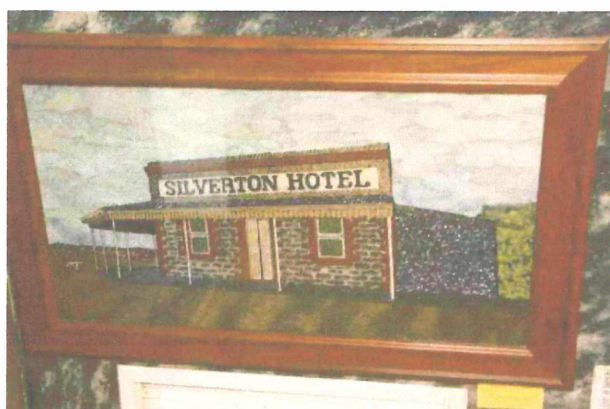
Beryl in Pegmatite



Extracting Beryl

On Sunday there was a field trip to Purnamoota Station to collect tourmaline. I did not go on this trip so cannot comment further. On Monday we went around to various mineral collections around Broken Hill, several of these people gave us the opportunity to purchase specimens.

The first stop was White's Mineral and Mining Museum. Artwork in this museum is made from ground up pieces of minerals. Some examples are shown in the 2 photographs below.



Artwork at White's Mineral and Art Mining Museum

Second stop was Ross Clark's collection. Ross showed us some of his better specimens – 2 of these are shown below. He also gave us the opportunity to buy specimens to supplement our collections.



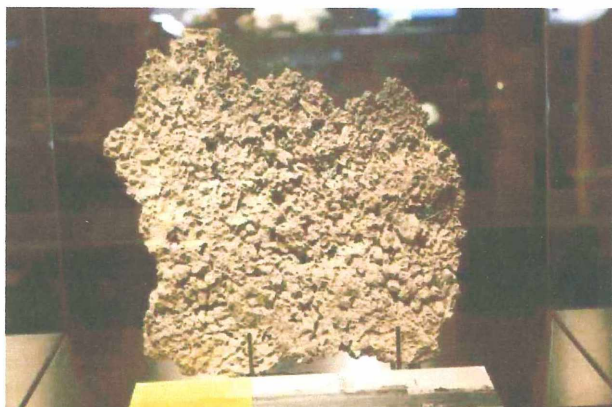


Raspite – Ross Clark's Collection

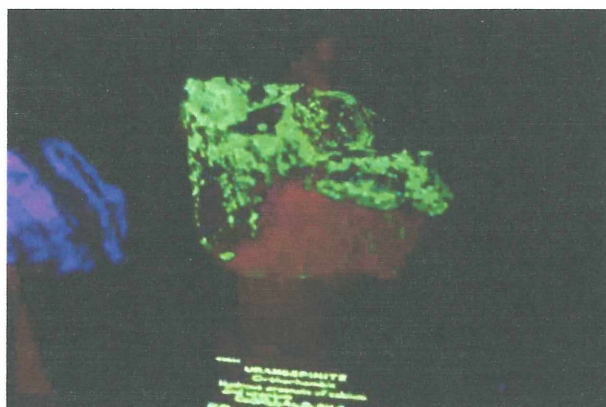


Rhodonite – Ross Clark's Collection

The next stop was The Railway Mineral and Train Museum, followed by Albert Kersten Mining and Minerals Museum. This museum contains a 42 kg silver nugget, as well as several minerals found at Broken Hill named after people associated with Broken Hill (Raspite, Mawbyite, Hoganite and Paceite), and kintoreite named after the Kintore open cut mine, also Segnitite named after Ralph Segnit in honour of his research on Australian Minerals. Also at this museum is the famous Broken Hill Silver Tree (unfortunately no photos are allowed of the silver tree – the only object in the museum for which photography is forbidden). Many other minerals were also on display. This museum still has copies of the second edition of "Minerals of Broken Hill" for sale for \$50 including postage within Australia.



Nugget of Native Silver - Mining & Minerals Museum



Fluorescent minerals - Mining & Minerals Museum

After lunch we visited Milton Lavers collection. The first photograph below shows a small part of this collection (there are several rooms with cabinets like this). There are a number of high quality specimens in this collection, a small sample of these are shown below.

This was followed by a visit to the John O'Dwyer Collection – a person specialising in selling high quality and expensive mineral specimens. Lastly we visited B.M.W. Minerals and Crystals where we were able to purchase more affordable specimens.

Another great day was had by all. Many thanks go to Trevor Dart for organising the field trips and to Steve Dobos for organising the visits to the collections.



Milton Lavers' Collection



Pyrosmalite – Milton Lavers' Collection

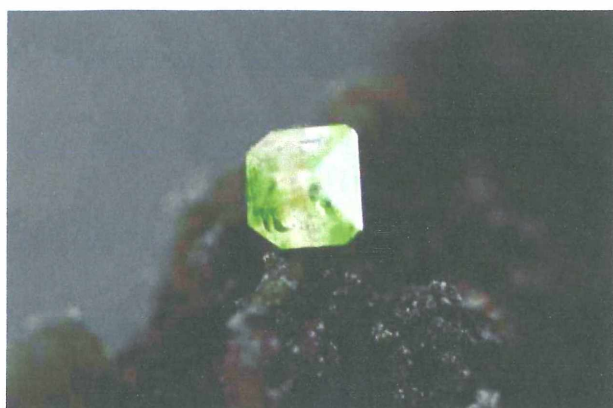




Rhodonite Crystal – Milton Lavers' Collection



Johannsenite - Milton Lavers' Collection



Smithsonite - Milton Lavers' Collection



Inesite - Milton Lavers' Collection



Specimens from John O'Dwyer Collection

### Publications

**"The Forgotten Explorers: pioneer geologists of Western Australia, 1826-1926"** by John Glover with Jenny Bevan. ISBN 978-0-86905-473-7. Available from Hesperian Press, PO Box 317, Victoria Park, 6979, Western Australia, telephone 08 9362 5955. Cost \$40 plus postage. A limited number of copies are available at the E de C Clarke Earth Science Museum at the discount price of \$35 for personal visitors.

Although officially it covers the period from 1826 (when Albany was settled) to 1926 (when Gibb Maitland retired from the Geological Survey of WA), it does refer to earlier exploration dating back as far as 1606. The book discusses many people who contributed to the understanding of the geology of Western Australia and if people such as Woodward (1890), J.A. Thomson (1909), Robert Austin (1855) and R. T. Prider (1935) had been listened to then iron ore, gold, and diamonds may have been discovered decades earlier. The book covers all areas of contribution including environmental geology (William Dugald Campbell 1900), explorers such as the Gregory Brothers whose epic journeys rival the the well known explorers (but without the mishaps and disasters), academics (E. de C. Clarke, W. G. Woolnough), the discovery of artesian water by government geologists ( Y. L. Brown, H. P. Woodward, and Gibb Maitland) which was I mportant for opening up pastoral land, mineralogists (Edward Sydney Simpson) and even the ex bushranger Captain Starlight, as well as many others. The book contains many historical photographs and illustrations, some of them previously unpublished. The book contains two



indexes, a general index and an index of names of people (over 300 names), as well as a comprehensive set of references for each chapter.

**Australian Journal of Mineralogy Volume 15, Number 1&2 2009** has now arrived and mainly features gold. Articles featuring gold represents the states of Victoria, NSW, SA, and WA. Articles not featuring gold represent the minerals prehnite, Neotocite, Coulesite from NSW and Tasmania. Of interest to WA collectors is the article "The Gold Nugget Bonanza of Goanna Patch, Western Australia" by B. A. Grguric, and the Obituary on Ernest Henry Nickel which includes a list of selected recent publications by Ernie Nickel.

### **FIELD TRIPS 2010**

By arrangement members of the Mineralogical Society are able to go on field trips organized by the Western Australia Lapidary and Rockhunting Club inc.

Please register with MINSOC Field Trip organizers prior to attending any of the following events, but only if you are a current (financial) MINSOCWA member to confirm event details.

THE WESTERN AUSTRALIAN LAPIDARY AND ROCKHUNTING CLUB INC. 31-35 Gladstone Road, Rivervale, 6103. Rivervale W.A.	
<b>PROPOSED 2010 ACTIVITIES &amp; EVENTS</b>	
Oct 24	Northam Area
Nov 14	
Further 2010 activities and events will be published during the year	

OS&H – Yes, occupational, safety and health applies on field trips

Please make sure you have the normal safety gear – field boots and hard hat, plus carry extra drinking water. Take sun screen and fly repellent. Drive safely

Particularly important for group field trips:-

Please register your details with excursion organizer – name, car rego, mobile telephone

Please follow instructions by excursion organizer and if you need to leave a field trip early, advise organizer.

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Committee Members (current at time the Newsletter is sent out – these could change after the AGM)	
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