



## The Mineralogical Society of Queensland Inc.

# NEWSLETTER

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### Office Bearers 2010 - 2011

**President:** Russell Kanowski 4635 8627 **Vice-President:** Steve Dobos 3202 6150

**Secretary:** Tony Forsyth 3396 9769 **Treasurer:** Phil Ericksson **Membership Secretary:** Sue Ericksson, both on 3711 3050

**Management Committee:** Theo Kloprogge 0417 949 998, Bev Mortensen 5548 6715, Sue Wearden 02 6665 3227



## UPCOMING MINSOCQ MEETINGS

MinSocQ meetings are held on the last Wednesday of each month, excepting December, at the Mt Gravatt Lapidary Society (**MGLS**) clubrooms, formally starting at 7.30pm. Anyone interested in minerals and mineral collecting is most welcome, at any meeting. The clubrooms are located at the bottom end of Carson Lane, which is off Logan Road, Upper Mt Gravatt, on the left as you are heading north towards the city, directly opposite McDonald's. There is plenty of free off-street parking available, immediately adjacent to the MGLS clubrooms.

**Reminder:** Membership renewals for 2010-2011 are now overdue, and this will be your last reminder; no further newsletters if you remain non-financial. A separate membership renewal form is attached.

**October 27: Metamorphism and metamorphic minerals in aluminous metasediments** (what were originally clay-rich or muddy sedimentary rocks), presented by Steve Dobos – don't let the title scare you - an alternative title might be **Crystals from Mud**. The presentation will be easy to understand! Chlorite, garnets, staurolite, andalusite, sillimanite, kyanite, cordierite, stilpnomelane, pyrophyllite, and their ilk – bring 'em in, including those from the June Broken Hill field trips, as well as those from the Mt Isa and Harts Range-Entia Valley areas.

- We will start to amass items for the *Auction Mineralia Stupenda*, at the annual end of year BBQ, so please start bringing in items you wish to donate for this worthy event.
- Please start selecting/preparing your best specimens collected on a MinSocQ field trip, to be judged for the Bob Taylor Trophy - these are to be brought in for the next meeting, on 24 November - see below

**November 24: Madagascar - minerals, gems, scenery and wildlife** presented by Fred Bruvel. Fred is a geologist with the Queensland Geological Survey, and together with his wife Jeannette (a gemmologist) recently spent a year in Madagascar exploring for minerals. If you have specimens from Madagascar (as well as from Mozambique and Tanzania, which have a similar geologic setting), please bring them to this meeting.

- Also, Fred is keen to organize a field trip to Madagascar, with a focus on minerals and gems, in the winter of 2011. A number of us are keen to explore this further, and help make it happen.
- But wait, there's more – please bring in items for the *Auction Mineralia Stupenda*, in December, to raise money for MinSocQ – remember, you may no longer love something, but that item may bring tears of joy to someone else, and it's all in a good cause. Mineral specimens, rocks, gems, jewellery and lapidary work, books, plants, pictures, calendars; weird, exotic, and eclectic bric-a-brac ... all will be gratefully accepted!
- And finally, please bring in your best specimens collected on a MinSocQ field trip, to be judged for the Bob Taylor Trophy, to be awarded at the MinSocQ BBQ.

**December 11 - BBQ:** No regular MinSocQ meeting, but instead, as usual, there will be the End-of-Year BBQ, which will be held at the home of Bev and Geof Mortensen (yes, he's a one *f* Geof), at 29 River Oak Drive, Jimboomba, commencing at noon. BYO everything, including folding chairs, to be sure, to be sure, and any last minute donations to the *Auction Mineralia Stupenda*. The Bob Taylor Trophy will be awarded for the best specimen collected on a MinSocQ field trip, and will be followed by the *Auction* - all in a good cause, namely MinSocQ.

2011 January 26 falls on Australia Day, and the meeting has been moved back one week, to February 2.

**2011 February 2: What makes a great mineral specimen?** by Tony Forsyth - do bring in what you think are some of your best, so we can look, learn and compare

**2011 February 23: The geology and the minerals of the Iramafimpa Mine, Eastern Highlands Province, PNG** by Larry Queen. This presentation last February was cancelled, so we will try again in 2011, and hope Larry will not be called away at the last moment.



**MINSOCQ MANAGEMENT COMMITTEE MEETINGS:** Commencing at 6.00pm, prior to the monthly MinSocQ general meetings: 24 November .... 2 February 2011, 30 March 2011, 25 May 2011



## 2010 - 2011 MICROMOB MEETINGS starting 10am

**November 13:** At MGLS; the meeting will commence with the obligatory cuppa. The topic will be the **Torrington-Emmaville mining district**, and will be followed by the customary problem, brag and swap sessions.

**December 11: No MicroMob meeting**, but all 'mobbers are expected at the End-of-Year BBQ instead.

**January 8, 2011:** At the Gold Coast Lapidary Club, 80 Pacific Av. Miami (Pizzey Park) - and what's more, it's air-conditioned! The topic will be **Minerals of the fossicking areas to be included in our first book**, and will be followed by the customary problem, brag and swap sessions.

**February 12, 2011:** At MGLS; the meeting will commence with the obligatory cuppa. The topic will be **Feldspars, micas, pyroxenes and amphiboles**; and will be followed by the customary problem, brag and swap sessions

**March 12, 2011:** Chez Tom Taylor in Toowoomba; the meeting will commence with the obligatory cuppa. The topic will be **Calcite and aragonite from the greater Toowoomba area**; and will be followed by the customary problem, brag and swap sessions

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## 2010 - 2011 DATES and SHOW CALENDAR

*Dates below are as accurate as currently possible, but may be subject to change before the events. We will post any relevant updates or changes in upcoming newsletters, but if any doubt remains, visit the websites of individual clubs or organisations.*

**October 30-31:** Toowoomba GemFest, Centenary High School, Ramsay St., Toowoomba, starting at 0900

**November 6-7:** Zeehan Gem & Mineral Fair, Zeehan Primary School, Zeehan, **Tasmania**

**November 20:** Suncoast Gem Show, Buderim Mt. State School, Main St, Buderim, 0830 to 1630

### 2011

**March 5 & 6:** North Brisbane Gem & Jewellery Festival, Aviation High School, Widdop St, Hendra, starting 0900

**March 11-13:** Minerama, Glen Innes, **NSW**, at the Combined Services Club

**March 19:** Gatton Lapidary Club Show, Gatton, 0800-1600

**April 22-24:** *It used to be the Warwick Easter Rock Swap, but is likely to become the Warwick/Darling Downs Antiques, Bottles, Collectables, Minerals and Gem Show, or some such, at Warwick Showgrounds, Warwick; we hope to provide an update in the December Newsletter. If you're not going to the Gemboree, go to Warwick!*

**April 22-25:** Gemboree, Bathurst **NSW**

**June 11-13:** 34<sup>th</sup> Annual Joint Seminar, Mineralogical Societies of Australasia, Melbourne, Vic



## WHAT'S BEEN HAPPENING

### MINSOCQ ANNUAL GENERAL MEETING HIGHLIGHTS

This took place at our usual venue, MGLS clubrooms, on 25 August, and attendance was quite good. The meeting was chaired by president Russell Kanowski, and began with a minute's silence in memory of Ron Young. After the usual references to our last AGM, and ensuing business, and apologies, Russell read the president's report, which is published hereunder. Phillip Erickson read the Treasurer's statement; we're in fairly good shape, but Society funds are not abundant. All positions were then declared vacant; there being no competing nominations for any position, the 2010-2011 officeholders were elected, as listed on the masthead of this newsletter. We are pleased to welcome new committee members Bev Mortensen and Sue Wearden.

Tony Forsyth gave a very brief update on the status of the Minerals Heritage Museum, of which he had become Curator. A more detailed report will be made available once Tony has been through all the MHM documents, and once a trustee's meeting is held. *[Previously, a special MHM trustees' meeting had been held at Ron Young's bedside, with Bob Bryan, Tony and Steve (representing Jim Harrison) attending. Ron resigned as Curator, and after listening to Ron's wishes, Tony was unanimously elected trustee in his own right, and Curator of MHM. (Tony had earlier resigned his position as a trustee representing MinSocQ). Ron then resigned as trustee, and wished his beloved MHM all the very best, knowing that it would remain in good hands.]* Tony relayed Ron's wishes that Steve be elected as the next MHM trustee representing MinSocQ, subject to the Society's approval. There being no other nominations, Steve was so elected.

Steve took the floor, and gave the reasons behind the proposed amendments to the Society's constitution, the key wording of which had been sent out along with the notification of the AGM. The first intent is to make explicit that the Society has always been and will continue to be not-for-profit, to fulfill new criteria for applications to the Queensland Gambling Community Benefits Fund. The second intent was to make explicit the Society's desire and aim to reach out to the younger generation, and hopefully incorporate new and young members. The third intent, driven partly by the need to reduce the paperwork, printing, folding and mailing of AGM and Special Meeting notices, is to formally permit such notification via email to those members connected to the net. All amendments were passed unanimously.

There was minimal discussion from the floor, though the subject of more frequent Society field trips was mentioned; the management committee will continue to investigate this further. The AGM was declared closed.

Immediately following, the video presentation that Tony had prepared for the end of Ron's funeral service was played, with sound track comprising the last half of the last movement of Ron's favourite, Beethoven's Emperor Concerto (No. 5). Jacki Young then took the floor, with reminiscences about Ron and his love for minerals, the Society, and of course the MHM. She relayed many of the personal feelings Ron had towards the end, and thanked all and sundry for their best wishes and support, especially Bob Bryan, Tony Forsyth, Russell Kanowski and Steve Dobos, as well as those that had helped out earlier at Cedar Creek, in preparation for Ron's chemotherapy.

Intentionally, there being no scheduled presentation, the formal meeting ended, for socializing and refreshments.

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### MINERALOGICAL SOCIETY OF QUEENSLAND INC. - PRESIDENT'S REPORT

It is with great pleasure that I present the President's report for the period August 2009 to August 2010.

The Society has continued to meet at the Mt Gravatt Lapidary Society clubrooms in Carson Lane, Upper Mt Gravatt. We are grateful to the Mt Gravatt Lapidary Society for allowing MinSocQ to continue to use their facilities. Despite having a varied and interesting program there has unfortunately been no appreciable increase in the number of members attending meetings.

During the past year we have been fortunate to receive formal presentations on a number of topics including feldspars, digital photography, topaz, Wolfram Camp minerals, and Volcanism in France – mineralogy, geology, and parallels with the Glasshouse Mountains. These were delivered by Steve, Theo and Tony. In addition several meetings comprised interactive discussions relating to various minerals or mineral localities with a set theme generally being nominated for the particular month. The June meeting comprised a feedback session on the Adelaide seminar and included a compilation of photos taken by delegates over the course of the seminar and subsequent field excursions. Thanks to Steve for assembling this compilation.

The micromount group is continuing to meet under the capable leadership of Sue Ericksson with numbers attending the meetings averaging approx 10 members over the year. Meetings this year were held mainly at Mt Gravatt clubrooms. Our thanks go to SueE for continuing to foster and lead this enthusiastic group of supporters.

I was fortunate to attend the 33rd Annual Seminar of the Joint Mineralogical Societies of Australasia which was held in Adelaide, South Australia on 12-14th June 2010. This event was attended by about 70 delegates with representation from all Australian states and New Zealand. The Queensland and Northern New South Wales contingent of 9 delegates and partners formed a very enthusiastic and cohesive group during the seminar and on the subsequent field trips. Special thanks go to Steve Dobos for the work he put into organizing our contingent and in particular for his efforts in making contact with our mineral colleagues in Adelaide and Broken Hill without which we would not have the pleasure of participating in post seminar field excursions to those areas.

Steve also continues to produce what I believe is a Newsletter second to none in mineralogical circles throughout Australia. I encourage all members to submit articles of interest to him to ease the burden of the editor's role. Thanks again Steve for all your hard work in producing a first class publication.

According to our records there are no members eligible for 10 year membership of MinSocQ due at this time.

On a sadder note our thoughts are with the families and friends of three past members - Keith Gregson, Ted Wearden and Ron Young, who passed away over the last year. Their contributions to MinSocQ will always be remembered by all members.

Once again I wish to thank the management committee for their support over the past year – your assistance and encouragement have made my task much easier.

In closing I would like members to welcome the incoming management committee and to afford them the support given to the past committees.

Russell Kanowski

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**Management Committee meeting, 29 September**, preceding the general meeting, with a full complement of 8 officeholders. First order of business was to welcome new committee members Bev and SueW; Sue had come from deepest darkest NSW to attend. The unusual 'busy' items (previous minutes and correspondence) were discussed and passed, and were followed by the Treasurer's report. Theo had compiled a 'to-do' list of specific items to be discussed, and hopefully acted upon, which we should address progressively; main ones at this meeting were field trips, reaching out to the younger generation, and hopefully, new members. Committee members individually and collectively are conscious of the need for renewed action - but we need more feedback from members!

Steve went through a wish list of items that we propose to purchase with funds from another application to the Gambling Community Benefit Funds (GCBF) - Steve hopes to lodge early next year. Steve was appointed as the Accountable Officer, in line with new GCBF submission requirements. He then steered the meeting as the committee went through the proposed amended constitution, in some detail. He also undertook to re-word and submit the revised constitution, which has to be approved before any GCBF application is made.

**MinSocQ Meeting Wednesday 29 September** Bev Mortensen gave a well illustrated presentation on her recent extended trip to NT, covering Harts Range and Entia Dome areas, as well as the Wave Hill area, and the mineral goodies therein. The meeting was well attended, and there was an abundance of material from the NT, with a large selection brought in by Bev herself. Great meeting, and very enjoyable - thanks Bev!

#### **MICROMOB MEETINGS – Sue Ericksson**

**14 August:** Once again we met at Mount Gravatt Lapidary Society Clubrooms (MGLS), with eleven attending, with apologies from Bev and Tom. The day started with much discussion including the whereabouts of several members including Doug Rumsey who was then on his way back to Longreach. Other discussions included the passing of Ron Young (he will be sadly missed by all in the Mineral Society) and the subsequent funeral arrangements. The MinSocQ AGM on Wednesday 25<sup>th</sup> of August was mentioned and all were urged to attend and also consider taking a position on the committee.

The Caloundra show was coming up again on 25<sup>th</sup> -26<sup>th</sup> of September, and we had been invited again to mount a display table but no decision was reached. This was to be carried over to the general meeting. Booklets for the 2011 Gemboree at Bathurst were handed out to those interested. The September meeting is to be at the Boonah

home of Vic Tarhanoff and the theme was changed to Whim Creek. WA. Attendees were asked to bring along any magnetic minerals or minerals that you suspect might be magnetic, to be tested by Vic's new 'machine', and also to bring any specimens that fluoresce ONLY under short or long wave so that Vic can establish which of his UV tubes is long wave and which is short wave

Field trips were discussed at length with several locations mentioned as being under investigation including Kingsgate and Running Creek. It was decided that the October meeting become a weekend meeting at Wallangra, staying at Ashford and possibly going onto Copeton Dam. Arrangements were to be distributed as soon as they are established .

The Biggenden theme followed with Steve starting the discussions before other research was presented by Russell. The mine started in the late 1880s as a bismuth mine before moving to magnetite and later, gold. It was an underground mine originally, became an open cut and near the end of mining became underground again. It then became a source of road metal and now is closed and under caretakers. There was a lot of show and tell as well as a few boxes of swaps brought along by Vic Cloete from Broken Hill, Cloncurry, Gold Coast hinterland and USA.

**11 September:** For this meeting we drove to Boonah to share the day with Vic Tarhanoff. It was a lovely day to be in the bush to talk rocks. We had a few absent and we started our day catching up on the activities and wellbeing of the present and absent members of our 'family'. It was interesting to note that seven of the eight MinSocQ committee members are Micromobbers. The latest edition (Issue 10) of The Australian Mineral Collector was presented for perusal. Anyone wishing to see this and any previous editions please ask me. Copies can be ordered from Steve Sorrell via [www.crocoite.com](http://www.crocoite.com) for \$A12.50. The October meeting is to be a weekend based at Ashford with fossicking at Wallangra.

Sue W. and Steve spoke about the Emmaville show held the previous weekend. The mineral tailgaters were down, as was the attendance. Late Saturday evening wind and rain set in and Sunday became a packup day. Field trips were down too. Rumour has it that the Warwick show will in fact be on next Easter in a slightly different form ... confirmation will no doubt come at some stage.

Discussion on the theme - Whim Creek - was led by Russell and Steve with comments added by SueW who has been there in times gone by. There is a good article on the area in The Australian Journal of Mineralogy - Volume 4 no.1. Discussion was followed by show and tell.

After lunch Vic Tarhanoff spoke of his work in constructing an LED lighting system. He demonstrated the processes he went through to achieve his goals through to the near-finished item. He then demonstrated a very sensitive detector that he has built to detect magnetism in small micromount specimens. Vic demonstrated the device using mineral and human sources of magnetism - there was, unfortunately, no-one with animal magnetism. Unfortunately, we were unable to solve Vic's problem of knowing which UV tube was long wave and which was short wave as he had burnt out his power supply. We had a great time, as we did at Vic's last year. Thanks for hosting the meeting again, Vic.



L: Lloyd, Glenys, Russell and SueW busily at it. R: Wulfenites are some 2 to 4mm in size - SueE photos.

**9 October:** The weather put paid to our proposed Wallangra trip, so once again we met at the MGLS clubrooms. We welcomed Wayne Russell as a visitor to our group; he'd come with Theo to learn a little about the group and the hobby. The calendar was discussed and with a couple of confirmations will be finalized for distribution. New to the library are the WA newsletter and the AJM (both tabled for reading). Russell and Steve gave reports on the recent Beenleigh Show. A get well/thinking of you card has been sent to Doug Rumsey who was just out of

hospital and needed a bit of cheering up - I urged everyone to make contact as he tends to be a tad isolated at times. Also in need of thought and prayer is Bev M. as her mother has been hospitalized - had a turn.

At the recent Adelaide seminar Steve was given a CD of the updated 'Essence of Microscope' and he has made three copies for the library, and all the files will also be placed on the Society's notebook computer. The CDs contain all the mineral and locality information extracted from 'The Microscope' - the New Zealand newsletter. They contain a wealth of information, but of course focus on New Zealand and zeolites. Worth a read!

There was a discussion about what would be an appropriate memorial for Ron Young. Ideas of a trophy (for micro or macro minerals) or a lecture were mentioned and whether it happens at the Society's AGM or a special dinner, and whether the lecture should be delivered by an eminent or learned person. All the ideas will be taken to the next committee meeting. Vic Cloete brought more USA spares for us to forage through which was much appreciated. Finally time came to discuss our theme - Minerals of The Flinders Ranges, and research by several members was presented before getting onto the 'scopes and into the show and tell. There were also some spares, mainly of Wulfenites, for the taking.



*Wulfenites galore. L: Sue E specimen R: Russell Kanowski specimen, also from the Avondale Mine. Crystals dimensions are in range 2 to 5mm - SueE photos.*

**CALOUNDRA GEM SHOW** Held on the weekend of 25-26 September: fantastic venue, extremely well advertised and organized; reasonable attendance, but apparently people were tending to hang on to their dollars, so the sellers were muttering a bit. MinSocQ had been invited to mount a display, similar to one we did last year. Sue and Phil Ericksson and Steve Dobos prepared and manned our displays, with three microscopes, projector and screen showing attractive specimens, etc etc. Russell came down from Toowoomba, for we had intended to present Eric Stevens with a Certificate of Appreciation, but missed Eric Stevens by 40 minutes (we did however have a *Plan B*). It was great to meet up with Eric and Bev, Ben Kaufmann, and all the dealers, plus several new ones. We targeted some potential new members with subscription forms, both dealers and members of the Caloundra Lapidary Club.



*Reaching out to the younger generation - the microscopes were a great success, attracting both young and old alike. We may yet get new members from this display, but distance will be an issue for the youngsters - SueE photos.*



**OUR ERIC:** You may not know, or may have forgotten, that Eric Stevens was one of the key founders of our Society, in June 1986. Eric was secretary and treasurer for the first year, he was president for three years, vice president for one, secretary for seven, treasurer for three, committee member for one, and editor of 16 issues of our newsletter (for almost 5 years). Eric also produced, single handed, 16 issues of *The Queensland Mineralogist*, always contributing one or more articles per issue (at times under various pseudonyms). Truly, he has done the Society proud.

In recognition of Eric's service to our Society, and his unwavering enthusiasm for mineralogy, MinSocQ had prepared a Certificate of Appreciation, which we'd been trying to present to him on a suitable occasion since December 2008. Since Eric had to return home early from the Caloundra show, we implemented *Plan B*. Sue and Phil, plus Steve, called in on Eric on their way home from the show on Sunday afternoon, and after much spirited barney, Sue actually presented Eric with said certificate, on behalf of all of us in the Society. Eric was pleased, as he had every right to be. Thanks for all the effort over the 24 years, Eric, it is greatly appreciated!  
SD photo

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## JOINT SEMINAR 2010 – VISITING COLLECTIONS in BROKEN HILL - Steve Dobos

Picking up from the last newsletter, we had decided, in view of the numerous things we wanted to accomplish at Broken Hill, to extend our stay by a day, and depart for home on Tuesday the 20<sup>th</sup> of June. Previously, Trevor Dart had supplied me with a list of names and contacts, for collections to visit, and on Sunday night, I made final arrangements for Monday the 21<sup>st</sup>. (As previously mentioned, Judy and Tony headed off on Monday morning, for a longer trip home, with unexpected *free excitement*).

So, Monday morning saw Allan Hart, Barbara & Bob Kuchel, Sue & Phil Erickson, Erroll Hagelstein, Russell Kanowski and Sue Wearden - *the Gang of Nine* - meet at White's Mineral Art Gallery & Living Mining Museum. (Donna and Lois had gone off to do their own thing). Our host Kevin White was quite a character, with much personal history, having been a miner in Broken Hill. The gallery re-creates the atmosphere of the underground, with sections of ceilings and walls sprayed with crushed ore, still sparkly after all these years. He made us welcome, and we sat and watched early film footage of Broken Hill and mining, imparting a sense of long history, at times contentious with strikes.

We then toured the galleries, piqued by 'paintings' made with crushed ore - the art aficionados would scoff - but they were interesting. Also on display was mining equipment as used underground, equally interesting. There were souvenirs for purchase, and for once, not everything was made in China. Moreover, there were lots of generally low end mineral specimens, and we were treated to a view of Barbara getting all excited over gypsum specimens. Several of us did in fact buy specimens. We could have stayed much longer, and were in fact told that we could come again later, free of charge, but we had to move on to keep our second appointment.

We assembled at the home of Ross Clark, whom we had met earlier on our field trips. Ross had his collection to view, and much material to sell, as he was preparing to move to the North coast of NSW. Ross made us very welcome, with tea, coffee and cake. Ross was extremely accommodating, having put out many boxes of specimens on the back deck for viewing, photography and selling...and we had a ball doing just that, in perfect weather! There was an abundance of high quality specimens from Broken Hill and environs, as well as from further afield, and those for sale were all at very reasonable prices.

If I remember correctly, Barbara was immediately drawn to gypsum specimens, literally quivering with delight, and emitting appropriate vocalizations. I was busy ferreting out Triple Chance and other beryls to buy, and very satisfied I was. Allan Hart appeared to be in heaven, not knowing which way to turn, what to photograph and what to buy. I must mention that Allan's hand-held scintillometer is now on our GCBF wish list, and said device was used to demonstrate that indeed davidite should not be kept in pockets. Several tasty rhodonites, davidites, cerussites, along with much much else, were purchased by the gang, enlarging and enriching our collections, focusing on Broken Hill material that is now hard to come by. It was also highly enjoyable and informative to discuss with Ross

the provenance and features of many specimens, the likes of which most of us had not seen. A fantastic morning ... we didn't want to leave. Many thanks Ross, from all of the gang!



At Ross Clark's: Ross's treasures - AH photo; rhodonite (and we were to see quite a few this day) - RK photo; parallel growth quartz (but not twinned) Olary province, some 17cm tall - SD photo; gypsum - BK photo.

We broke for independent visits to the Geocentre, the Railway Mineral and Train Museum, last minute shopping, and lunch. A smaller group visited the Railway Mineral and Train Museum first whilst other went to the Geocentre. There was much of historical value at the Railway Mineral and Train Museum, including the buildings themselves; incredible heritage value, but we did not have much time, and could not do the museum justice. The principal attraction was of course Tess Alfonzi's mineral collection, now housed here. (Tess and Dominic Alfonzi opened and then operated the Triple Chance mine for many years). Her

collection here was somewhat neglected, covered by a thin sheen of dust (from last year's dust storm, see newsletter v57, Oct 2009). That in itself did not detract, but what made me somewhat dejected was that the display appeared to be missing some of the more spectacular beryl crystals that I still remember from the original collection. [I had viewed the original collection at Triple Chance in 1969, at Tess's invitation, and I had spoken to Dominic Alfonzi prior to our trip (he now lives at White Cliffs), and so my memory is not playing tricks].

*This beryl intergrowth at the Railway Mineral and Train Museum may have deep spiritual significance, and perhaps is even indicative of what the 'gummint' is trying to do to us. It has no particular crystallographic significance, as beryl does not twin; larger prism is some 9cm long - SD photo.*



On to the Geocentre, but again, just for a lightning visit. A small number of generally spectacular Broken Hill minerals, some quite large - very well displayed and lit, with informative labels. A quick look at the 'Silver Tree' epergne, one of the display centerpieces (again, see newsletter v57). We could have spent hours there, and will, next time at Broken Hill.

Next on our list was the collection of Milton Lavers; we were expected, and Milton was charming. He led us through a shed in his back yard, with a twinkle in his eyes, past tablefuls of generally fifth rate specimens, and mineral 'junk' ... we were not impressed. Milton opened his display, and then we were! And how! Milton's collection is the fruit of a lifetime's labour-of-love, featuring numerous superb specimens collected or acquired by Milton, some dating back many decades, and even pre-dating Milton. Whilst several specimens from the general area were on display, the bulk of the collection comprises the minerals from the Broken Hill line-of-lode, especially species from the extensive oxidized zones.

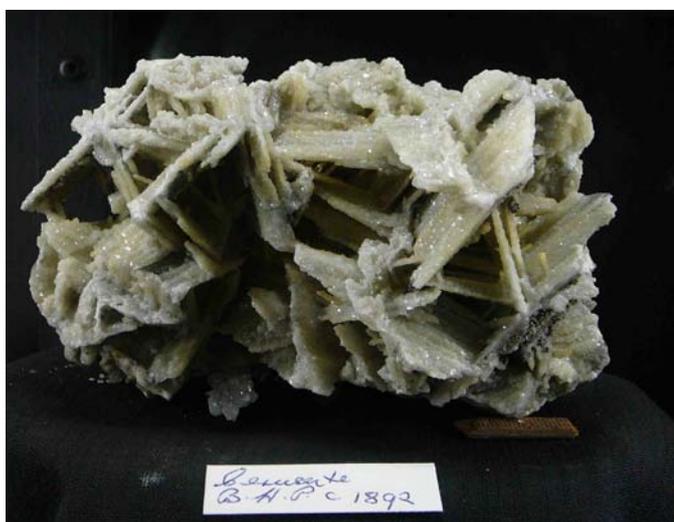
To my mind, several factors contribute to the repeated re-definitions of 'wow-factor' that this display exuded. Firstly, many of Milton's specimens were simply world class in their own right, and many many more were best-of-type for Broken Hill. You name it, Milton had it, in spades. After a while, it almost became too much - where do you turn, and what do you look at, in the presence of such quality, such rarity and such beauty? Milton was kind enough to remove the glass panels on many of his cabinets, to allow us to take close-up photos (and without reflections). I myself was torn between taking numerous photos, and simply sitting and admiring the mineral beauty around me - after a little while, I chose the latter, and gave up on the photos. I freely confess that for once, I lost my infatuation with pegmatite minerals, and as for Milton's beryls ... well, I don't even remember if he had any. We seemed to be wrapped in our own little worlds, even then not knowing what we liked best.



*Milton's collection: Bob Kuchel, trying to deciding what to photograph, but awed by what is on display - AH photo; a sample of one of the many display cabinets, made even more stunning by the dark room and good lighting - RK photo.*

Milton was a font of knowledge, with a story or history for each specimen. Even though several of us had seen the collection some time ago, you could never get enough time for all of it to soak in. The few photos here simply do

not do the collection justice. What more can I say? *Mineralia Stupenda!* Words will never do Milton's collection justice, so if ever you get a chance, you must go and see it. Again, we ran out of time. Milton, from all of the gang, many thanks. You have invited us back, and if any of us are at The Hill, we *will* take up your invitation.



*More of Milton's collection: clockwise from top left - Another part of a stunning cabinet, native copper as it's rarely seen, johannsenite (probably in solid solution with hedenbergite), pyrosmalite. Left; cerussite - but note the date! All RK photos.*

As an aside, earlier on this day, Trevor Dart was interviewed live on ABC radio, about the concept of a permanent mineral collection to be set up and displayed in Broken Hill, to preserve *The Hill's* mineral heritage. They would even like to claw back some key specimens on exhibit in museums, or in private collections, elsewhere in Australia. Trevor and members of the Broken Hill Mineral Club want this dearly, and though it will take considerable time and effort, I have no doubt that we will see action on this front. Their first target, not surprisingly, is Milton's collection. I am happy to relay that since our visit, Milton has indicated that he does not

want his collection to leave Broken Hill. Go BHMC!

*Below: one of Milton's smaller cerussites - RK photo.*



Next on our list was the collection of John O'Dwyer. Some of us had introduced ourselves to Johnno last May at Lismore, where he was tailgating. Of course we were made welcome. Johnno's specimens were top-shelf-top-end, very well displayed and lit, and fortunately, there were not nearly as many on display as in Milton's collection. It was much easier to focus in on our individual favourites, to stand there and quietly drool. (I suspect there was a mop nearby, to be used once we departed). How can I describe this display? Fabulous!

*Part of one of John O'Dwyer's cerussite shelves at left; and carbonates below - RK photos.*



I decided to forego my usual dietary habits for a while to 'free up' some funds, and purchased a very cute hedenbergite, while the rest of the gang took photos, and marveled at the specimens. Barbara, I think, was fraught with indecision over a large but delicate gypsum cluster. In the end, she didn't buy it, and Bob may have had something to do with that. By the way, Johnno has a website, [www.odwyerminerals.com](http://www.odwyerminerals.com), and you can view many more of his superb minerals there. Thanks again John for the opportunity to view your display - we hope to see you in Lismore in 2011.

Night was falling, but we had one more stop to make. We were greeted by Bernard and Marjorie Williams at B.M.W. Minerals - nothing to do with *Bayerische Motoren Werke AG!* We were made welcome, both Bernie and Marjorie being very friendly and open - MYO tea and coffee to boot. Most minerals on display were for sale, at very reasonable prices, mainly sourced from all over Australia, but with a hit on Broken Hill and environs. Again, we indulged - there were in fact some choice little specimens for sale - and I think we were all satisfied with the proceedings, judging from the satisfied grunting noises that seemed to permeate the night air. I certainly was.

We did not have the opportunity to meet up with Frank Pace, nor to see his collection - he was working on this day. But perhaps it's just as well, we really did *none* of the collections justice in the one day, and one more collection would have been too much. To Allan, Barbara and Bob, we really enjoyed your company, and hope that you had an enjoyable time being part of the MinSocQ gang. See you in Melbourne next year!

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## ANOTHER LOOK AT TIGER'S EYE - Eric Stevens

The rich brown chatoyancy of this mineral has made it a favourite amongst the lapidary fraternity and mineral collectors world-wide. For well over a century mineralogists believed that tiger's eye formed when the fibrous mineral crocidolite was infiltrated by hot silica rich solutions and replaced with quartz - similar to the process of the formation of petrified wood. Mineralogists name this process pseudomorphism or the exchange of one mineral with another whilst retaining the first mineral's morphology. Tiger's eye was long acclaimed as an ideal example of this. Now textbooks may have to be revised as in 2003, academic staff from Pennsylvania State University examined tiger's eye using a number of modern sophisticated scientific techniques and debunked the previous theory. The scientists used optical microscopes, XRD and transmission electron microscopes during their research.

Their research has shown that pseudomorphism is not what gives tiger's eye its shimmer. Studies have revealed that the chatoyancy or cat's eye reflections are the result of micro fibres of crocidolite asbestos completely sheathed in quartz. The crocidolite and the quartz grew simultaneously in microscopic cracks that appeared as host rocks underwent tectonic stresses and the minerals were deposited inside these cracks by percolating solutions through the fractured rocks.

Another interesting fact found was that the quartz and asbestos crystals nucleated on opposite sides of a single fissure and grew into each other as the cracks sealed to make a quartz-crocidolite vein. Crocidolite is naturally steely-blue in colour, and the researchers also discovered that the brown colour of tiger's eye is the result of tiny crystals of iron oxide that have formed at a later stage and positioned themselves on the crocidolite fibres.

Repeated tectonic episodes caused some slow rotation in the rocks, cracks were reopened but the direction of crocidolite growth changed. Because reflection of light from the crocidolite fibres causes the cat's-eye effect, the zigzag chatoyancy which is a hallmark of tiger's eye provides a history of the rock's displacement path during tectonic periods.

By now the textbooks and museum displays should have been revised as tiger's eye can no longer be cited as an excellent example of a pseudomorph, as it is not one. It is now an excellent model for the crack seal vein filling process and should teach students and lapidaries about those tectonic earth movements that capture light and preserve it. A case of co-deposition of quartz and crocidolite **not** isomorphous replacement

Heaney, P. J. and Fisher, D. M. New interpretation of the origin of tiger's-eye; Dept. of Geosciences, Pennsylvania State University, University Park, Pennsylvania 16802, USA. Pp. 323-326.

*Editor's note: 'Crocidolite' as a mineral name was discredited by the Amphibole Subcommittee in 1978, but we all still use it - we know what we mean! Formally, crocidolite is really an iron-rich member of the riebeckite-magnesioriebeckite amphibole solid solution series - it's monoclinic, with a fibrous habit (the fibres are minute in diameter, but relatively long (up to 50mm), and are highly flexible. The typical crocidolite formula will be close to  $Na_2(Fe^{2+})_3(Fe^{3+})_2Si_8O_{22}(OH)_2$ . In fact, crocidolite was a highly prized 'asbestos' (there are several minerals that may comprise 'asbestos') because of its high flexibility and low thermal conductivity. Unfortunately, crocidolite micro-fibre inhalation is the prime cause of the cancer mesothelioma - so it is not now used in developed countries.*

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By the way, the answer to the last puzzlement was scholzite from Reaphook Hill SA.

And now to end with one of Theo's literary favourites: *Before I had studied Zen for thirty years, I saw mountains as mountains and waters as waters. When I arrived at a more intimate knowledge, I came to a point where I saw that mountains are not mountains, and waters are not waters. But now that I have got its very substance I am at rest. For it's just that I see mountains once again as mountains, and waters once again as waters.*

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