

Mineralogica Tasmanica



**THE MINERALOGICAL SOCIETY OF TASMANIA INC
JOURNAL & NEWSLETTER
NO. 6 AUGUST 2014**

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THE MINERALOGICAL SOCIETY OF TASMANIA INC.

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Meetings Are held on the second Friday of each month at 7.00pm, in the first year lecture theatre, Geology Dept., University of Tasmania, Sandy Bay. Visitors are most welcome.

Membership fees \$15: single, \$20: family (includes 4 newsletters/yr)

Patron: Professor Ross Large, University of Tasmania

Website: <http://www.mineral.org.au/socs/taspg001.html>

ABN: 49 582 252 658

*The Mineralogical Society of Tasmania is a member body of the
Tasmanian Lapidary and Mineral Association Incorporated.*

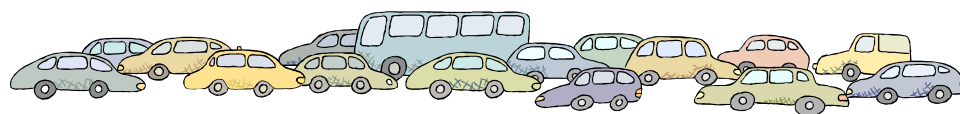


Davidite (La) : $(La,Ce)(Y,U,Fe)(Ti,Fe)_{20}(O,OH)_{38}$

Radium Hill, South Australia

(B.Chandler photo & specimen)

PROGRAM / EVENTS



Date	Event
Aug 31	Trip: Flowery Gully
<i>Sept 6</i>	<i>TLMA meeting Launceston</i>
Sept 13	Meeting: Bob Beattie: Madagascar
Sept 28	Trip: Maydena
Oct 11	Meeting: Tony Joyce: Boogardie to Nobby's Creek
Oct. ?	Trip? NW?
<i>Nov 8-9</i>	<i>Zeehan Gem & Mineral show</i>
<i>Oct 28 – Nov 1</i>	<i>Mineral Symposium, NZ</i>
<i>Nov 21</i>	<i>Meeting: Andrew McNeill: Mining in Tasmania</i>
Nov 29	Christmas Function
<i>Dec 7th</i>	<i>TLMA meeting Launceston</i>

Italicized items are non-MST organised events: ask Ralph for contacts.

Nb: Most trips are tentative dates. PLEASE CONFIRM field trip details and your attendance, at least two days in advance, with a nominated **Field Trips Officer** or contact the president.

Reminder: The next field trip is to Beams Quarry at Flowery Gully on Sunday 31 Aug 2014 – don't forget

For the TLMA field trips program: see page. 4

T.L.M.A. News and Field Trips 2014

Tasmanian Lapidary & Mineral Association Inc.

(TRIPS MAY BE CHANGED, CHECK WITH TRIP LEADER)

DATE		LOCATION	For	Club	TRIP LEADER	CONTACT
Aug	17 th	Milton	Agate	LCT	P. Sawyer	62633237
Sept		Beaconsfield			Query	
Sept	6 th	TLMA AGM Launceston				
Oct						
Nov	8-9 th	Zeehan Fair		TLMA	K. Dunstan	
Nov	23 rd	Lune River	Fern/Agate/ Wood	LCT	R. Hewer	62487669

The trip leaders **MUST** be contacted with **2 days** prior to the trip.

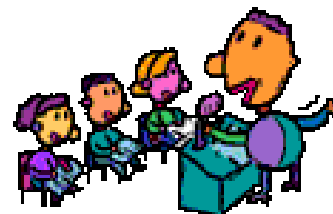
Please remember the **T.L.M.A. Code of Ethics** at all times.

Stone swaps can be held at field trips – check with trip leader.

Note: Safety Gear: Hard Hat, Safety Glasses, High Visibility Vest, Steel Cap Boots.

The last TLMA meeting was held in Ulverstone on June 7 The next TLMA meeting will be in Launceston in September. The Tasmanian Gemboree is still planned for 2016, and is still in need of volunteers, so please contact us if you can help?

PRESIDENT'S REPORT



Recent MST affairs

On June 13 Steven Barratt and John Newlands gave a presentation on the Jane River goldfield, from his experiences prior to its being locked up.

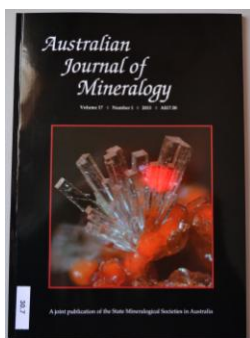
On July 11 we held our annual Auction night and AGM: the present committee was mostly returned, but Brett Chandler has kindly offered to assist with the newsletter.

On Aug 8 the Popes gave a well illustrated talk on their visit to the Radium Hill mine and township for a reunion as part of their recent trip to South Australia. Please see Marnie's brief overview of their trip visiting Radium Hill mine on page 9.

There have been no field trips in June or July.

Australian Journal of Mineralogy

The latest issue of this great journal (17/1) is now out (see below). We can show you copies on request and provide subscription forms (\$28/yr). The journal is a must-have for all Australian mineral collectors and mineralogists. It is of a similar standard to the Mineralogical Record, but the focus is on articles on Australian minerals and localities. Any contributions (e.g. "What's New"), advertising, suggestions can be directed through the editor Dermot Henry (dhenry@museum.vic.gov.au) or via the president. The second Tasmanian issue is still in prep. Several back issues of the AJM are available from the society for discount prices to members (via Ralph).



AJM Volume 17(1):

- The phosphate deposits of South Australia.
- Hydrated manganese sulphates from Womobi mine, Vic.
- Paratacamite – A new mineral from the Carr Boyd Rocks mine, WA.
- The silver mines of Sunny Corner, NSW.

MST Library

Interesting articles in journals recently received include:

Micronews (Canadian Newsletter)

Microscope (NZ)

Mineralogical Society of SA Newsletter

Mineralogical Society of Vic Newsletter

Mineralogical Society of NSW Newsletter:

Mineralogical Society of Qld Newsletter

Mineralogical Society of WA Newsletter

Australia and New Zealand Micromineral News



Many interesting articles occur in these newsletters; please don't hesitate to ask to borrow these, or any of our books. We also hold many mineral-related books and some videos and CD-ROMs. A catalogue is available from Michael Pope (pope00@ozemail.com.au, ph 03 62442023), who also curates a photo album for the Society; all relevant donations (eg. from field trips) are most welcome (electronic or hard-copy, but please add some details).

Australia and New Zealand Micromineral News

The ninth issue of the Australia and New Zealand Micromineral News is now available online. The link is [Australia_and_New_Zealand_Micromineral_News](#). You can choose to read online or download.



Issue 9 – June 2014

Editor: Steve Saville | jsaville@ozemail.com.au

Cover photo:

Photomicrograph of pseudomorphs of
Andradite from Narre Warren, Victoria, Australia
© Andrew G. Smith, using Scanning Electron
Microscope (SEM) at the University of
Wollongong, Australia

#9: Pseudomorphs in
Microspecimens, Iridescent
Andradite from Queensland,
Minerals from the Narre Warren and
Harkaway Quarries, Forum on the
Photography of Microminerals, The
Zeolite Group of Minerals, The
Pleochroism of Tuhualite

Maydena-Styx field trip 6 April 2014

By John Newlands

Some twenty one hardy souls turned up at the Maydena Hub for this trip. I won't try to list names as I've forgotten several of them. After a heart starting espresso in the cafe we headed down the Gordon River Rd then the Styx Rd stopping at the Maynes Rd gate. That required a key from the Norske Skog paper mill at Boyer which unfortunately didn't come with instructions such as the need to keep twisting the lock to get it to disengage. The road opened onto an attractive and inviting valley but we stopped at the first side road. Behind a narrow grove of trees was the shallow Carpenters Ck from which a few colours had been found in the past.

We hit the creek with mix of digging techniques plus three of four metal detectors and a yabby pump to scoop out gravel pockets. Alas the biggest gold appeared to be no bigger than a fly speck. It was a pleasant easily accessed spot shaded with man ferns and a gentle water flow... everything you want except decent gold. The source of the creek gravel appears to be the Truro Tillite a glacial conglomerate of Permian Age (?) which underlies the bituminous and pyritic Woody Island Formation. Many will have collected glendonites from that higher formation in the now out-of-bounds Gold Ck quarry further up the hill along Styx Rd. Since it appeared nobody would strike it rich an alternative adventure loomed, that of checking out a hitherto unknown outcrop of pink granite further up Carpenters Ck. The Maydena 1:25,000 geology map shows no granite at all so perhaps this could be a groundbreaking discovery. We drove a kilometre or so up the side road to get above the headwaters of the creek. Some got sidetracked with pyrite in the road fill probably quarried a kilometre or two away. After walking past it a couple of times it turned out the 'outcrop' was in fact a ledge of hard tillite in the creek bed. This horizon consisted of hard sandstone matrix with erratics of granite and was not solid granite, something I failed to check. The actual granite intrusion could have been miles away having been scooped up by glaciers in the Permian or perhaps lay deeper down. Interestingly the ferns here were growing epiphytically around celery top pines, something I haven't seen elsewhere.

Undaunted we got back in the cars to head a few kilometres west to Maynes Hill quarry, normally off limits due to eagles supposedly nesting nearby. This Cambrian basalt is a southerly element of the Read Volcanics and appears metamorphosed to a somewhat serpentine like texture. It has glassy green slickensides and veins of white chalcedony. Occasionally the chalcedony shows fine black bands some of lapidary quality but no blue or red as we expect from Tertiary agate. The piece of the day was found by Bianca who has now cut and polished it I believe. The elusive Fourteen Mile diggings consisting of a pit and flume are in the base of the deep gully to the north of the quarry but are not worth the bother of an arduous hike. I think the tillite not basalt is the source of the few specks of gold found in the area.

After lunch we headed back out on to Styx Rd after again securing the gate. Some 10 km along near the Big Tree Reserve we branched off onto Jubilee Rd. Under the forest peace deal this road is now controlled by Parks and Wildlife. However a section of it is notorious for being blocked by fallen trees. The secret plan was if a fallen tree was too big for a hardware store chainsaw we'd have to pick at it with rock hammers one woodchip at a time.

After this came the laneway with low hanging branches brushing the windscreens then onto a shrubby section where the Precambrian bedrock was evidently unsuited to growth of tall trees. One highly visible section of road cutting has produced some nice quartz crystals in the past but there are almost certainly better spots covered by soil. The rock is a boxwork of leached dolostone with patches of silica flour containing occasional vugs. Think of snow with crushed glass. The cutting is now an ungodly mess and I fear the gate may one day be locked. Perhaps that vug has been worked out and I now wonder if the uphill spot where we turn the cars around could be the go. It has single crystals with sharp terminations to 30 mm across some with a slight smoky hue. Or perhaps there is a fabulous crystal cave just metres away. To keep onside with NPWS we must keep the gutters free of rubble and preserve the structural integrity of the road. Bob Beattie thinks he may have left his long handled Estwing pick there so if anybody has it. Thus concluded the day; no world beaters but interesting nonetheless. On the way home Ralph and Dave visited Rusty Morley of Tyenna ostensibly to talk about sapphires. I presume they got the info they wanted and were not fed to Rusty's menagerie of tiger snakes.



Moganite and Ageing in Agate

By John Richmond

Moganite is an independent polymorph of silica, first described by Florke et al. in 1976 and 1984, and is said to show alternative crystal stacking at the micro unit level. However, this is only seen under very high magnification.

The specimens that I have looked at had the appearance of cloudy grey chalcedony. Due to its rather ordinary appearance it wasn't recognised by geologists, mineral collectors, and hobbyists before its identification as a mineral. Moganite in an almost pure state comes from Mogan in the Canary Islands so that is where it gets its name.

English Geo-chemist Terry Moxon has had a long time interest in agate, its formation, growth characteristics and geochemistry. I have known Terry now for about ten (10) years and have sent him quite a few agates from different Tasmanian and Australian sites of various ages for him to study. He found that Moganite was present in many of the agate looked at so he decided to investigate further. The result was a paper published in 2004 (Moxon and Rios) which described how Moganite and water can be a function of ageing in agate.

He has had access to some of the most modern lab equipment available at Cambridge and it would probably be true to say that he has made good progress in his agate studies. Terry has published two (2) books on the subject and numerous scientific papers. Writing about agates and other silica based rocks Terry describes how the molecular internal water (silanol water) and Moganite in agate decreases with ageing. Molecular water is not to be confused with common ground or meteoric water which is separate and readily absorbable and can pass in and out of some rocks as conditions allow.

Terry writes that at the micro level, as the molecular water slowly leaves the silicate, crystallites grow in the tiny voids. This process ends when all the Moganite has been transformed. I can't really get a clear picture of this process in my head, but Terry explains young agates have more molecular water but little crystallite growth. Conversely older agates have less or no water and Moganite but show distinctly more crystallite growth.

This is shown clearly on page 33 of Terry's book 'Studies on Agate' (2009) where agates from 26 different sites and ages are listed in descending age ratios. Starting with chalcedony from Yucca Mt USA at 13Ma, down to some remarkable 3480Ma agate from Warrawoona in our Pilbara region. While the graph line isn't a straight one, a definite ageing trend is indicated, so it may be possible in the future to tell if one agate, or some object made from agate or a silica based rock is younger or older than another one.

Terry does not make that claim at the present time, but clearly his research may be pointing in that direction.

Table 1 Variation of crystallite size and moganite content with the age of the host rock

Region	Age of host (Ma)	No of samples	Mean Cs ₍₁₀₁₎ /nm ($\pm 1\sigma$)	No of samples	Moganite /% ($\pm 1\sigma$)
1. Yucca Mt. USA	13a	1	40	1	56
2. Mt Warning, Queensland, Australia	23b	9	49(4)	7	19(4)
3. Cottonwood Springs, Texas, USA	37c	6	59(6)	6	10(4)
4. Chihuahua, Mexico	38d	9	57(4)	6	12(4)
5. Washington, USA	43e	6	68(6)	6	9(5)
6. Las Choyas, Mexico	45d	6	65(4)	4	9(5)
7. Khur, Iran	50f	8	79(11)	13	6(5)
8. BTVP, Scotland	60g	6	71(4)	6	11(2)
9. Mt Somers, Canterbury, N. Zealand	89h	8	56(5)	9	11(4)
10. Rio do Sul, Brazil	133i	9	52(7)	10	18(4)
11. Semolale, Botswana	180j	9	79(9)	8	3(2)* ²
12. Nova Scotia, Canada	202k	8	71(9)	5	5(1)
13. Agate Creek, Queens ^l , Australia	275l	11	74(8)	7	6(2)
14. Thuringia, Germany	285m	7	83(4)	6	5(5)* ¹
15. Derbyshire, England	311n	6	95(8)	5	1(2)* ¹
16. Northumbria, England	391o	8	72(8)	5	4(1)
17. Eastern Midland Valley, Scotland	412p	11	92(20)	8	3(2)* ¹
18. Western Midland Valley, Scotland	412p	8	97(18)	6	3(3)* ¹
19. Cumbria, England	430q	6	191(22)	3	0* ³
20. Cumbria, England	452r	8	88(20)	3	4(2)
21. Northern Territory, Australia	513s	6	106(7)	5	0* ⁵
22. Maydena, Tasmania	488-542t	7	118(14)	4	0* ⁴
23. Lake Superior, USA	1100u	8	96(14)	7	4(3)* ²
24. Killara, Western Australia	1840v	6	> 200	2	0 ¹
25. Maddina, Western Australia	2720w	1	> 200	1	0
26. Warrawoona, Western Australia	3480x	2	> 200	1	0

Age reference given in: a-Sawyer *et al.*, (1984); b-Webb *et al.*, (1967); c-Henry *et al.* (1994); d-Keller *et al.*, (1982); e-Tabor *et al.*, (1982); f-Aistov *et al.*, (1984); g-Musset, (1984,1986); h-Barley *et al.*, (1988); Hawksworth *et al.*, (1988); j-Carney *et al.*, (1994); k-Hodych & Dunning; (1992); l-Hutchinson, (1965); m-Goll, (1997); n-Stevenson & Gaunt, (1971); o-Francis, (1992); p-Thirlwell, (1988); q-Compston *et al.*, (1982); r-Millward & Evans (2003), s-Hanley & Wingate, (2000); t-Tasmania Geo^o Survey Sheet 4626; u-Davis & Paces, (1990); v-Pirajno & Adamides, (2000); w-Trendell *et al.*, (2004); x-Nelson, (2002).

c The undated agate host is found between two radio dated hosts (36.3 and 36.8 Ma). A mid point is used.

e The Teanaway River Basalt is badly altered and an age of 39 to 47 Ma is given. A mid point is used.

l Agate Creek agates are from trapped andesite that is between fossil dated shales: 260 and 290 Ma.

t Tasmanian Geological Survey Sheet 4626 lists the basalt agate hosts as Cambrian. * Shows the number of samples identified by XRD with zero moganite content. Regions in bold are considered as outliers: see text. (data from Moxon and Carpenter, 2009)

An extract of the Popes trip to South Australia for the Radium Hill Reunion (that's our Popes – not the Catholic one)

Easter 2014 at Radium Hill

Radium Hill is located 110km South West of Broken Hill, and 460km North West of Adelaide, and was Australia's first Uranium mine. Officially the Radium Hill area covers 247 hectares, or 610 Acres. Its current predominant use is sheep and cattle grazing. There are almost no trees or bushes, only a few large Gumtrees which have survived the decades of continuous outback heat and drought.



Photo taken at Tikalina Station –Typical of the surrounding country (B.Chandler photo)

Early Radium Hill Workings.

It all started in 1906 when a Mr. Arthur John Smith found gold and copper in the Olary Mineral Province near the current site of Radium Hill. He named at least 5 mines before the discovery of Radium Hill. These being:

- Little Queen Bee Gold and Copper Mine
- Kings Bluff Copper Mine
- Centralia Copper Mine
- Boomerang Gold Mine
- Outalpa Gold Mine

Arthur Smith then mistook a dark coloured ore for Tin Oxide. He sent samples to the Adelaide University where a young Douglas Mawson analysed the ore and found it contained Uranium and Radium, plus Ilmenite, Rutile, Magnetite, Hematite, Pyrite, Chalcopyrite inter grown with Quartz and Biotite, together with minor amounts of Chromium, Vanadium and Molybdenum.

Smith immediately pegged a mining claim and started small scale production. The mine was originally called "Smith's Carnotite Mine". Smith referred to his discovery as a Hill of Radium, and Mawson proposed the name Radium Hill.

Smith allowed the lease to lapse in 1908 after only 2 years due to high operating costs, difficulty in processing and refining the Uranium, and lack of water.

But the lease was immediately taken up by The Radium Hill Company who sunk shafts and extracted 350 milligrams of Radium, and 150Kg of Uranium. The miners and their families lived in tents and humpies on the banks of Olary Creek. Mining ceased in 1914 due to the outbreak of World War 1.

The mine restarted in 1923 and was operated by the Radium and Rare Earth Treatment Company No Liability, which continued operations until 1931. Miners would bore gelignite blasting holes in an underground ore bearing stope, and in those days they worked from a ladder stage sometimes up to 150 feet above the nearest horizontal surface without the aid of any safety ropes and or harnesses. But they also suffered the same fate as their predecessors. In the 1940's, while the Americans were developing the Atom bomb, they took an interest in the Uranium. But nothing came of this.

Mining recommenced after World War II, with a Department of Mines geological survey in 1944, when Reg Sprigg, a government geologist, accompanied by Harry Lively and Tommy Carpenter made a detailed geological survey, and preliminary exploration and diamond drilling was work done in 1946-1947.

By 1950 a camp of 40 men had been established. In March 1952 an agreement was entered into between the Commonwealth Government, the Government of South Australia, the Combined Development Agency of the United States and the United Kingdom, which provided for the purchase of the uranium output, initially for defence purposes. Immediately after the signing of the agreement, plans were formulated and executed to bring the mine into production. Men who played key roles in the development of this project were Sir Thomas Playford, Premier of South Australia, Sir S. Ben Dickinson, Director of Mines, Reg Sprigg Geologist G.P.H. Jeffery, Chief Executive Officer, and Terry Rogers, GM.

The Mine.

The Radium Hill Mine was officially opened on 10 November 1954 by the then Governor General, Field Marshall Sir William Slim. The Main Shaft was sunk to a depth of 420 mts, topped by a head frame 39 mts high. The longest under-ground drive extended from the Main Shaft at co-ordinate 6800N to 3800N a distance of 915 mts. The ore body lodes dipped at angles from 30 to 70 degrees and ranged up to 5 mts in width averaging 1.2 mts. Like Broken Hill, the richest ore was very close to the surface, and in Radium Hill's case, some deposits were within 3.3 metres of the surface. Mining methods followed conventional procedures for narrow stope mines as practised elsewhere in Australia. Electricity was supplied from Morgan which is located 200 km south of R. H. A large up casting exhaust fan designed to operate in conjunction with the down casting main shaft was the principle mine ventilation system. The ore was hoisted to the surface in skips at a speed of 305 mts per minute where it was crushed to 1.5" and pre-concentrated by Heavy Media separation using Ferrosilicon suspension S.G. 2.85. Further fine grinding by Ball Mills prepared the ore for the Flotation process where reagents of diesel fuel, linseed fatty acids, peltogen, and cresylic acid enabled uranium enriched concentrate to be filtered from waste material. A total of

150,000 tons of concentrate were railed to Pt. Pirie for further refining which produced 860 tons of yellow cake. This yellow cake was worth about 15 million pounds whilst the Government had invested 6.75 million pounds in developing the Radium Hill and Pt. Pirie centers. The miners worked hard, and removed an average of 375 tons of Ore a day. This shortened the expected life span of the mine from 10 years down to 8 years with the mine producing 860 tonnes of Uranium before closing. Next to the mine workings were support buildings, which included administration and technical buildings, the workshops, transformer station, main store, fuel depot, and South Australian Railways buildings.



Photo of the ore and Uranium product displayed in the Radium Hill Museum (Tikalina Station) (B.Chandler photo)

The Community.

Early accommodation was provided in tents, however in the late 1950s approximately 1200 people were living there in 165 houses and over 220 two man cubicles. Over 35 different nationalities were represented with the majority being British followed by Australians. Services provided included an A.I.M Hospital, Public School and Kindergarten, Post office, Police Station, Government retail Store, Weather Station, State Bank Branch, 2 churches and a Civic Hall. A Wet Canteen, Milk Bar, Library, Swimming Pool, Golf Course, Tennis Courts, Recreation Room and a Drive-In Cinema were also provided, along with a bus service to Broken Hill. The supply of electrical power to the field was by means of a high voltage (132,000volts) transmission line, from Morgan some 201Kms. distance. The water supply came from a 2 million Gallon Water Tank high on the nearby hill. Because the average rainfall was only 190 mm. per year and the evaporation rate about 2.500m, water was piped in from Umberumberka Reservoir near Broken Hill, some 85 km distance away. Each house also had its own rain water collection tank and septic tank. The only trees were the ones the government planted along the town roads. If people wanted any sought of garden,

they had to do it themselves, at their own cost, a fine example being Mrs Pingelly. A Railway spur line was constructed from the main Broken Hill line, a distance of 18 Km. The first train into Radium Hill arrived on the 2nd Oct 1953, and was called the "Atomic Comet". An aerodrome was constructed and regular flights by Guinea Airways enabled Broken Hill to be reached in 18 minutes and Adelaide in 2 hours. The Royal Flying Doctor Service made use of the field for emergency and regular visits by the Flying Doctor. The road was initially from Olary, but later it came from Cutana following the railway spur line.

The Closure

Official closure of the mine occurred on December 21, 1961, at which time more than 3000 people had worked at Radium Hill for varying periods during the mine's life. Workers and families moved out, and the mine and town were dismantled. Houses were sold for £300, with the buyer having to remove them themselves. Only a few remnants of the mine still remain, including the 2,000 ton Crushed Ore bin, a couple of ore crushing structures, plenty of conveyor line concrete footings, and numerous support building foundations.

Up until the year 2000, nothing existed at the Radium Hill. Now, the area is maintained by the Radium Hill Historical Association, with annual reunions held each Easter by ex-Radium Hill residents and family members to preserve the historic and cultural heritage of the former Radium Hill town and mine. A small barbecue shelter, storage and shower shed sit on the old school playground.

For more information see <http://www.radiumhill.org/aboutus.htm>

Thurs 17th April. Broken Hill to Radium Hill –through Cockburn, which is the NSW/SA border town, where it is possible to stand with a foot in each state in the same town.

Our visit to RH was Barry's first return visit since the family left in 1961.

The Radium Hill Museum and Visitor Information Centre is in Tikalina Station complex, and we stopped for a while there to sign in, and view the past and present memorabilia. The 20km track from here into RH was soft, sandy, and wet in places (from the previous week's very heavy rain), and towing the caravan @ about 20 kph it took us over 2 hours to reach the RH school ground and set up camp. Round the campfire that night we found out that the many vans in there belong to the regulars, and that most people tow in camp trailers, or come in camper vans, but a couple of other vans did come in besides us. Vehicles were mainly 4WD's, but there were a couple of cars as well – one being a Statesman, and his claim to fame was that it took him 6 hours to come in the 20km track. The 1st reunion of former residents of RH was held at Easter 1991, and over 400 people attended, and reunions have been held annually since. The objectives of the RHHA are to establish and preserve the historical and cultural heritage of the former Radium Hill town, Pioneers Cemetery, and Heritage Museum. The President Kevin Kakoschke and the committee work tirelessly researching, promoting, writing, (several books published) & fundraising for luxury items like toilets, showers, tanks, and the continuing placement of information plaques.

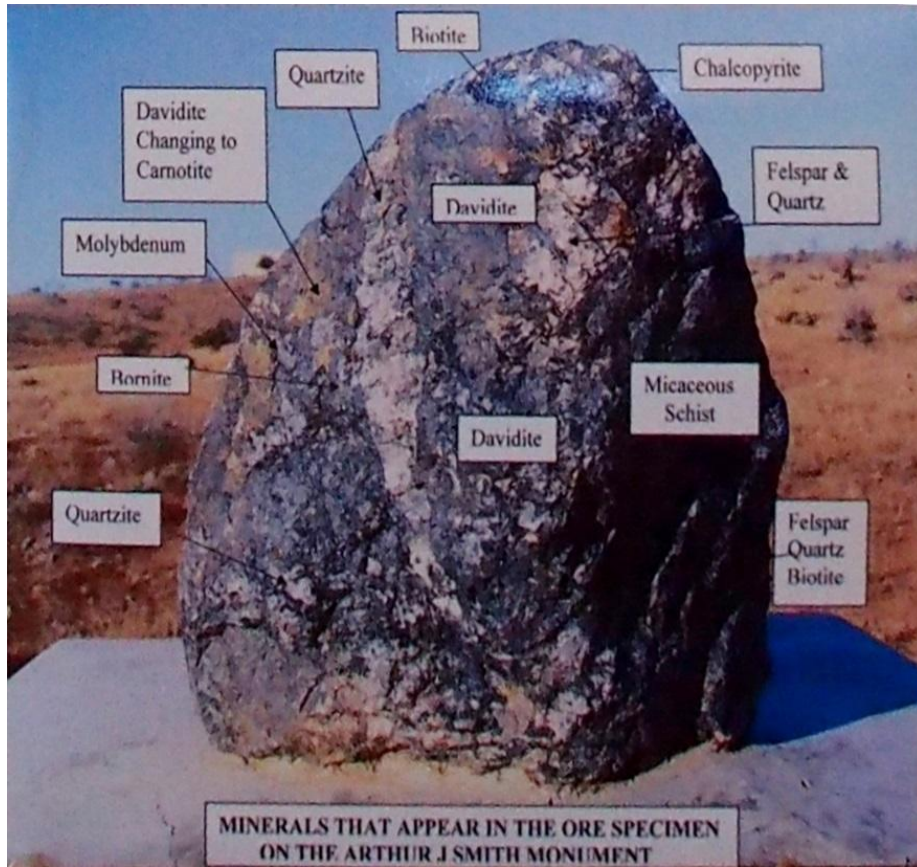
Fri 18th April. The RHHA have erected plaques at all the significant sites, as well as former residents' names at most of the house sites. We spent the day driving round the original township, first finding the house site that Barry had lived in with his parents & siblings, then photographing other sites, before driving out to the mine site and railway station site. We followed a track towards McDonnell Hill and found water in the Olary River, with Rutile predominant in the dry river beds. The group round the campfire that night was well over 120, as many more former residents had come in during the day.

Sat 19th April. About 9.30 am Kevin and his wealth of knowledge led the Heritage Tour round the area pointing out much unknown information, the highlight being a stop at the former tip site, (which was a real trip down memory lane for all), followed by another house site plaque unveiling. At noon we arrived at the Heritage Pioneers Cemetery for the (early) Anzac Day Commemoration ceremony and interment of 'Jack Geer's Ashes' (a former resident). The afternoon Tag-a-Long comprised of 18 4WD's (all full) to visit Luxemburg and Queen Bee Gold/Copper Mines. The tracks were very rough in places with the drive taking over an hour each way. New information plaques were installed at both mines, with fossicking time allowed. Amongst the copper rocks I found a very nice malachite formation at the Queen Bee Mine, but not much else. Saturday Night's entertainment included the drawing of the raffle (with over 50 prizes), The Ghost Town Cabaret, followed by a brilliant Fireworks display. A book called 'The Mines & Minerals in the Olary Province of SA – Radium Hill & New Luxemburg Mining Areas, by Kevin R Kakoschke & Glen Francis' is in the MST library.

Sun 20th April. The Easter Bunny delivered Easter eggs to all, before we gathered at the partially rebuilt Roman Catholic Church (ruins) for a simple non-denominational Easter service. It was a lovely morning so the teenagers in the group decided to go swimming in Teasdale Dam, which was unseasonably full. We tagged along for a look and I ended up collecting some rock samples that had been scrapped from the bottom of the dam a few weeks earlier when it had been dry, all of which had never seen the light of day before. After an early lunch, 15 (full) 4WD's joined Kevin's Tag-a-Long Tour to Lake Maldigo via the Olary River in Maldory Station, along rocky and bull-dust filled tracks, again taking over an hour to reach our destination. This is a salt lake (and river) in the middle of nowhere, and in early days it caused many deaths. Maldigo River last flooded on 7th Feb, 1997 when the area received 7" of rain in one day, which is the normal yearly quota. Gold in Quartz has been found in the past in the area – but not in great quantities or easily, but neither the less we spent an hour chipping and panning, while the teenagers again decided it was a good swimming area. We followed the track back about ½ way before turning into Nilpena Hut Track, which was formally the power line track from RH to Morgan, we crossed the Olary River and still in Maldory Station we followed the track back to RH via the airport. The big screen had been set up and after a community Roo Stu meal round the campfire, we watched 1955+ silent movies of RH, with many of the residents recognizing themselves.

Mon 21st April. saw most of group packing up to leave, so we did likewise, the track out had improved with so many vehicles travelling on it and it did not take as long to reach the main road. There were many fine old railway stations that were asking to be photographed along our routes, so we obliged. There is a manned Quarantine Station at Oodla Wirra, and when asked where we had come from, we answered "RH", the officer replied with "on your way, I know all your fresh supplies went in the community meal last night". And with that, we headed to Peterborough.

Barry, Marnie & Michael Pope.



The minerals that appear on the Arthur J Smith Monument -Radium Hill



Ore storage bins at the Radium Hill mine site (B.Chandler photo)

Tony's Teasers (Quiz No.1)

See if you are able to answer the following questions;

1. Odd one out – Libertine, Spessartine, Uvarovite, Almandine
2. Main metal mined at Prominent Hill, South Australia
3. Nasty chemical, in Crookesite & Lorandite formerly used in rat poison
4. Odd one out – Cubic, Trigonal, Hexagonal, Octagonal, Monoclinic
5. Colour of Chalcantite
6. Purple mineral found at Barberton, South Africa
7. Odd one out – Bazzite, Topaz, Pezzottaite, Morganite
8. Mineral named after Mrs F. Rosemary Weilly
9. Rare earth element used for headphone magnets. Atomic weight 60
10. Odd one out – Apophyllite, Heulandite, Stilbite, Pollucite
11. Carbonate mineral found in peastone
12. Name for yellow Beryl
13. Light blue strontium mineral
14. Mediterranean island with pebbles of aplite and tourmaline
15. Commonest mineral at the South Pole
16. Orange mineral found at Berezovsk, Ural mountains, Russia
17. Odd one out – Strunz, Dana, Hansen
18. Mineral found on Lihir Island
19. Colour of Smithsonite

20.Irridescent mineral in counter tops at McDonalds, Sandy Bay

21.Mined by Lynas Corp. at Mt Weld, WA

22.Pink manganese carbonate

23.3x minerals found in the Dirty Bugger pocket, Rogerley mine, Weardale,
UK

Answers to Tony Joyce' quiz will be published in the next Newsletter, so hold on to your answers until then.