



Tea Tree Gully Gem & Mineral Club Inc. (TTGGMC)

Clubrooms: Old Tea Tree Gully School, Dowding Terrace, Tea Tree Gully, SA 5091.

Postal Address: Po Box 40, St Agnes, SA 5097.

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**Apr
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2015**

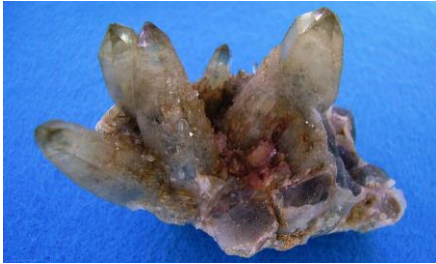
"Rockzette"

Tea Tree Gully Gem & Mineral Club News

In this edition...	President's Report	Meetings, Courses & Fees.
<ul style="list-style-type: none"> • Diary Dates • Stop Press • President's Report. • Club Activities. • Meetings, Courses & Fees. • Mineral Matters - Quartz (Part 5). • Lapidary - 'Tractor Tyre Tumbler'. • Members Out and About. • General Interest. • Members Notice Board. • Useful Internet Links. 	<p>Hi All, This week, a group of members are heading off to Horsham for the Gemboree. I hope the weather god is good to us. And, hope Gwen does well in the silver competition. The planning for the 2015 Exhibition is under way; only 2.5 months to go. Any suggestions will be gratefully appreciated. Regards, Ian.</p>	<p>Meetings Club meetings are held on the 1st Thursday of each month except January: Committee meetings start at 7.00 pm. General meetings - arrive at 7.30 pm for 8.00 pm start. Faceting (times to be advised) <i>Course 10 weeks x 2 hours Cost \$20.00.</i> <i>Use of equipment \$1.00 per hour.</i></p>
	<h3>Club Activities</h3>	<p>Lapidary (Tuesday mornings) <i>Course 5 weeks x 2 hours Cost \$10.00.</i> <i>Use of equipment \$1.00 per hour.</i></p>
<h3>Diary Dates</h3>	<h3>Competitions</h3>	<p>Silver Craft (Friday mornings) <i>Course 5 weeks x 2 hours Cost \$20.00.</i> <i>Use of equipment \$1.00 per hour.</i></p>
<p style="text-align: center;">2015</p> <ul style="list-style-type: none"> • April 3rd to 6th, 2015 National Gemboree, Horsham, VIC. • April 10th 11th and 12th, 2015 Riverland Gem and Mineral Club - Mineral Stock Sale. 10am - 4pm. Corner of McGillivray Road and Hamlyn Street, Glossop SA 5344. • 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). 	<p>Competitions have been suspended indefinitely and are currently replaced with members showcasing an interesting part of their collection. Field Trips No fieldtrips planned during Summer months. Library Librarian - Augie Gray There is a 2 month limit on borrowed items. When borrowing from the lending library, fill out the card at the back of the item, then place the card in the box on the shelf. When returning items, fill in the return date on the card, then place the card at the back of the item. Silver Craft Friday mornings - 9 am to 12 noon. Cost \$20 for new short course attendees. All are welcome.</p>	<p>While some consumable materials are supplied by the club, trainees must supply any additional requirements. Trainees who use the club equipment (for example, magnifying head pieces, faceting equipment, tools, etc.) must return them to the workshop after usage. Trainees are also encouraged to purchase and use their own equipment. In the interest of providing a safe working environment, it is necessary to ensure individuals using the workshops follow the rules set out in <i>Policy No. 1 - 20/11/2006</i>. It is necessary that <i>Health and Safety</i> regulations <u>are</u> adhered to at all times. Trainees must ensure: that all work stations are left in a clean and tidy state; that all rubbish is removed and placed in the appropriate bin; and where applicable, machines are cleaned and oiled.</p>
<h3>Stop Press</h3>	<p>Tuesday Craft Tuesday mornings - 11 am to 2.30 pm Faceting, etc. All are welcome. Contact Doug (08 7120 2221) if you would like to learn faceting. Wanted - The faceting group occasionally has members wishing to buy a 2nd hand faceting machine & accessories. Could anyone with one not being used please contact: Doug Walker 0871202221 or Russell Fischer 0417083227</p>	<p>It is necessary that <i>Health and Safety</i> regulations <u>are</u> adhered to at all times. Trainees must ensure: that all work stations are left in a clean and tidy state; that all rubbish is removed and placed in the appropriate bin; and where applicable, machines are cleaned and oiled. The Tea Tree Gully Gem & Mineral Club Inc. will not be held responsible or liable for any person injured while using the club machinery or equipment.</p>
<ul style="list-style-type: none"> • Saturday, May 9th, 2015, 11am - 3.00pm Social Field Trip to Granton and Denise Edwards' place - to view their mineral collection and to enjoy a sausage sizzle. \$1.00 donation per person (to go to the club) 11 MacDonnell Street, Highbury, SA 5089. (SE cr. Almerita Street) • See 'Members Notice Board' for additional 'Meeting Reminders/Updates' (Last Page). • Suzzane B joined the Tuesday Group on 31/03/2015 and updated us with lots of photos of her new Port Lincoln residence and her 'speccy' workshop equipped with its own shower and toilet. 	<p>The Tea Tree Gully Gem & Mineral Club Inc. is not and cannot be held responsible or liable for any personal injuries, loss or damage to property at any club activities, including, but not limited to, meetings, field trips, all crafts and annual shows. An indemnity is to be signed by all participants before each and every field trip activity they attend.</p>	<p>Club Subscriptions \$25.00 Family. \$20.00 Family/Pensioner. \$15.00 Single. \$12.50 Single/Pensioner. \$10.00 Joining Fee.</p>



Agate nodule lined with Quartz var Amethyst with Goethite inclusions, Agate Creek, Qld.



Quartz var Smoky, Torrington, NSW.



Quartz var Amethyst and Quartz var Smoky, Mooralla, Victoria.



Quartz var Amethyst, McDougals Well, NSW.



Quartz var Amethyst, Fluorite and Calcite, Agate Creek, Qld.



Quartz (var Amethyst and var Smoky) Kuridala Qld.



Quartz and Calcite, Agate Creek, Qld.



Quartz var Amethyst, Agate Creek, Qld.



Quartz var Amethyst with Goethite inclusions, Agate Creek, Qld.



Quartz var Amethyst and Quartz var Smoky, Mooralla, Victoria.



Quartz var Amethyst and Calcite, Agate Creek, Qld.



Quartz var Amethyst on Calcite, Agate Creek, Qld.



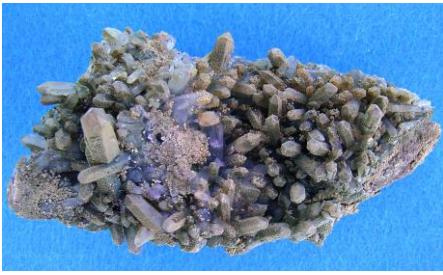
Quartz var Amethyst, Agate Creek, Qld.



Quartz var Amethyst with Goethite inclusions, Agate Creek, Qld.



Quartz var Amethyst, McDougals Well, NSW.



Quartz, Biggenden, Qld.



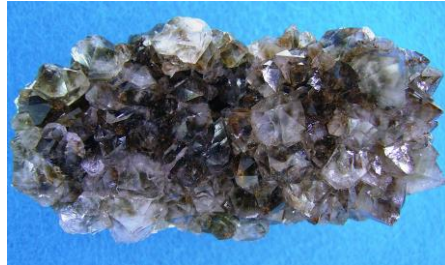
Quartz var Smoky and Schorl, Lake Boga, Victoria.



Quartz, Crystal Mountain, Mt Isa District, Qld.



Quartz var Smoky and Schorl, Lake Boga, Victoria.



Quartz var Smoky, Agate Creek, Qld.



Quartz var Smoky, Mooralla, Victoria.



Quartz var Smoky, Mooralla, Victoria.



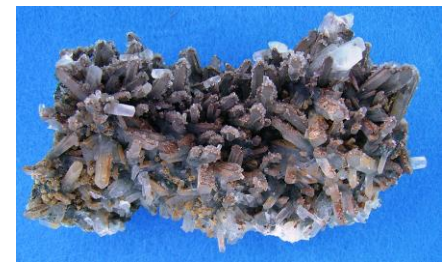
Quartz var Smoky, Mooralla, Victoria.



Quartz, Biggenden, Qld.



Quartz var Smoky, Torrington, NSW.



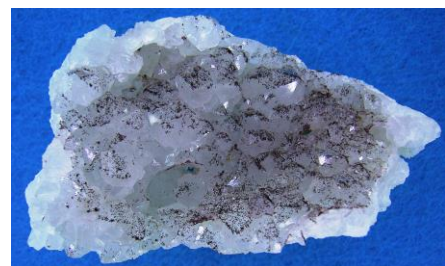
Quartz, Biggenden, Qld.



Quartz var Amethyst, Mt Elliott, Cloncurry District, Qld.



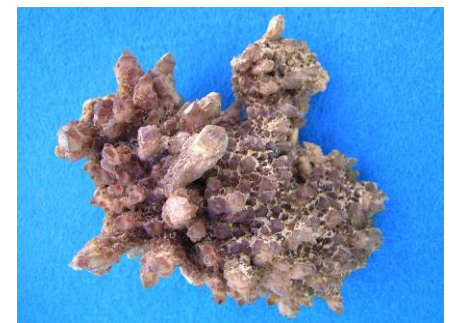
Quartz var Smoky, Torrington, NSW.



Quartz with Goethite inclusions, Agate Creek, Qld.



Quartz var Smoky, Torrington, NSW.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Crystal Mountain, Mt Isa District, Qld.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Torrington, NSW.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Kingsgate, NSW.



Quartz var Smoky, Elsemore, NSW.



Quartz, Torrington, NSW.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Crystal Mountain, Mt Isa District, Qld.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Toms Mountain, Mt Isa District, Qld.



Quartz, Torrington, NSW.



Quartz, Torrington, NSW



Quartz, Toms Mountain, Mt Isa District, Qld.

A 'Tractor Tyre Tumbler' by Anthony Noel

A Tractor Tyre Tumbler

Have you ever thought about speeding up the process of tumbling? Well I did. I tried many times, until I finally built 'Big Burther'!

Some 40 years ago, I started tumbling, when we were living in Pt Augusta. In those days, there was very little information available about the process, but I managed to get hold of a book from New Zealand; 'Tumbling' by the Victors.

Initially, I started off with a single barrel horizontal tumbler, and followed the instructions in the book to the letter. The first batch of tumbled stones worked out perfectly, so I threw the book away and thought, 'well that was fairly simple'. Well! The next batch was a disaster! I couldn't work out where I went wrong; find the book and start again.

What had I learnt? It was not until I made mistakes and had to work out where I had gone wrong, did I really learn anything. They say, 'Practice makes perfect.' The problem with tumbling is that the learning process is delayed, waiting for the process to finish.

Not to be put off, and once I thought I had it down pat, I built a two barrel horizontal tumbler. However, it still seemed to take forever! So I upped the barrel size from 6" to 9", then to a 12" hexagonal barrel. By this time, a few years had passed. Then *Vibrosonic Tumblers* came on the market, so I bought one from the 'States'. Success at last; this tumbler managed to speed up the process. However, other problems emerged when I found I was chewing out the plastic, moulded barrels, which weren't cheap to replace.

Around this time we moved to Mt Torrens in the Adelaide Hills where we brought a house which had three phase power supplied. Well, being an electrician by trade, I new three phase motors were a lot cheaper than single phase, so the motors running the tumblers were replaced with 3 phase units.

In due course, I managed to get hold of a three phase 45 degree angled, ex-foundry sand mixer, which could take a 44 gallon plastic drum. This unit had potential to upscale my effort, but the neighbors didn't appreciate the noise, and the plastic drums only lasted about two weeks when running non stop.

In a state of frustration, I would lay awake for hours some nights trying to work out how I could get around some of the problems; until I came up with the idea of using 14" car tyres. I got hold of a Morris Minor diff, locked up the spider gears, mounted it on a frame, and stuck 4 x 14" car tyres, on both ends of the diff. Success! This worked well and eliminated both the noise problem and the chewing out of barrels.

By this time, we had a Gem shop at the Birdwood Museum and a Gem and Mineral collection on display

At this location, we were selling tumbled stones and pet rocks faster than I could produce them. So, if I wanted to keep up with demand, I had no choice than to go bigger and faster with production.

Both the Morris Minor tyre tumbler and the 45 degree angle tumbler went to Woodsies Rock Shop in Mildura, and I started building a tractor tyre tumbler.

I managed to get hold of a tractor tyre, wider than the first tractor tyre I used, which didn't cost anything. As well, I got hold of a 2" shaft with roller bearings, an industrial reduction box, and a 3 phase motor. These were then mounted on a steel frame.

To stop the rough stone from slipping inside the tyre, especially when they became rounded-off, and to get a smoother finish, I put 4 large tractor tyre lugs inside the tyre. This assisted in lifting and rolling the stones.



Tractor Tyre Tumbler - 'Big Burther'.

After a fair bit of fine tuning, it worked well, with 40-50 kilos all up weight of rough stone, 60-80 grit, plus water. The process involved loading about 30-40 kilo of rough stone, followed with 5 kilo of 60-80 Grit Silicon Carbide, then added water to about 2" above the level of the rough stone.

This setup meant that I could stand about 20 feet away and barely hear the tumbler running. Yet, in less than 1 week, the tumbler was rounding off Quartz. In 2 weeks the harder stones like agate, jasper, and petrified wood were being rounded off as well.

Normally, I start off with rough stone from small up to 20-30 cm. and run the tumbler non-stop for a week. At this point, I remove the stone and put it through a 1/4" mesh sieve. The smaller stones are set aside and the remainder is returned to the tractor tyre. If necessary, I would add another 5 kilo of 60-80 grit and refill the tyre with water as described before. After another week, I would check the stones by taking out an ice cream container full, wash off the stones and make sure there was no chipping. If all okay, I would run it for another week and check it again to see if the stones had a semi-sheen, if not, I would keep on running the tyre tumbler until the stones were okay. At this stage, I would take a sample and fill one of the *Vibrosonic* plastic barrels, add 600 grit and run it for a couple of days, and that would tell me if all the stones in the tyre were ready for the run in 600 grit.

As well as developing the tractor tyre tumbler, I also converted a 24" *Vibro Flat Lap* into something similar to a large *Vibro Tumbler*. I did this by cutting a 16" 4x4 tyre in half, made up a frame to hold one half of the tyre, took the flat *Vibro* plate off & replaced it with the frame and half tyre.



24" Vibro Flat Lap Conversion

This machine would take about 10-15 kilo of material and that would run for about a week with 600 grit before the polishing stage. I sampled this load as described earlier - put an ice cream container of stones in one of the *Vibrosonic* plastic barrels with Tin Oxide and run it for a day, then check the polish. Normally, this process was okay, but if not, it was more time spent running the load in 600 grit.

To do a run of larger rough stone, say from 30-60 cm, I have to drop the tractor tyre tumbler speed. This is because there is too much chipping with larger stones, which is caused by the 4 tractor lugs inside the tyre. The speed is critical, and if it's running to fast the stones seem to drop off the lugs inside, rather than rolling. You can see in the photo that I have two different size pulleys to change the speed. When tumbling larger rough stone they all need to be about the same size. If there are smaller stones, the larger stones will pound hell out of them and they will be ground down to nothing.

I can confidently say that the Tractor Tyre Tumbler is the best one I have built. Furthermore, it's the only way I can compete with the price of imported tumbled stones.

All things considered, even when collecting the rough stone yourself, preparing it, buying the silicon carbide and paying for power, it's probably cheaper to buy 'tumbled stone' wholesale (sourced from overseas).

However, I can remain competitive, because I have a 2KW solar power system (I don't have to worry about the cost of power) and I buy bulk (4 x44 gallon drums) 60-80 silicon carbide at auction, at a good price.

Anthony Noel.

Tony (Anthony Noel) is a member of the *York Peninsula Gem and Mineral Club*, the editor of the GMCASA quarterly, *'The Trader'* and one of the conveners of the *'SA Gemboree 2018 Committee'*.

Thank you Tony for a very interesting article.

Out and About - The happy Wanderers - Email 02/03/2015

We are safely home again from our 2 weeks caravan trip to Victoria. As we do each year, we first went for the weekend to the Jazz Festival in Halls Gap, and then we continued down to the Great Ocean Road to make our way home.

Won't bore you a lot with the details. Instead, I have enclosed some pictures we took from our trip.

At the Otways, we visited the Lighthouse (01) and on the way back we saw these lovely Mum & Baby Koala (02&03), crossing the road, which of course made my day! We also did a round trip through the Otways which is really worth a visit. On one of the walks we came across those magnificent Sequoia trees also known as Giant Redwood Trees (04) which have been planted about 75 years ago.

Of course, a picture of the 12 Apostels (05) can't be missed, although there are not 12 any more!

And to finish our trip, a couple of nice sunrises (06) at Apollo Bay and (07) at Albert Lake at Meningie, SA.

As always, till the next trip,
Cheers
Gerry & Ellen
The Happy Wanderers



Morning at Albert Lake at Meningie, South Australia.



Mum & Baby Koala - this encounter made my day!



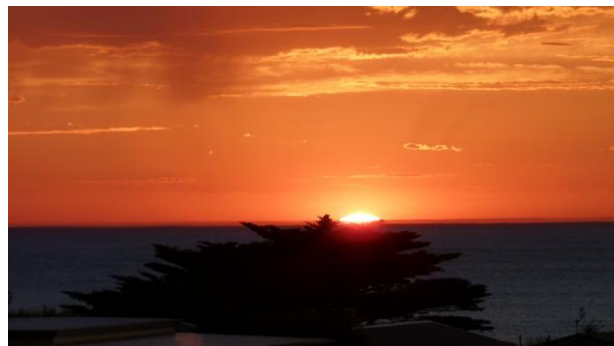
At the Otways, we visited the Lighthouse.



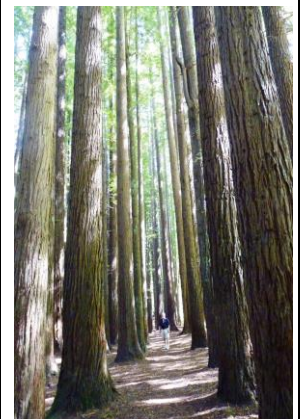
Mum & Baby Koala just crossed the road.



12 Apostels, Great Ocean Road, Victoria.



Sunrise at Apollo Bay, Victoria.



Walking amongst the Sequoia Sempervirens.

Ian, Janet, and Mel attended the Canberra Rock Swap - March 2015.

While in Canberra for a week, we took the opportunity to visit several places of interest; the details follow in the form of a picture gallery spread over the next three pages...

Text extract taken from: <http://www.nationalrockgarden.org.au/rock-collection-2/federation-rocks/>

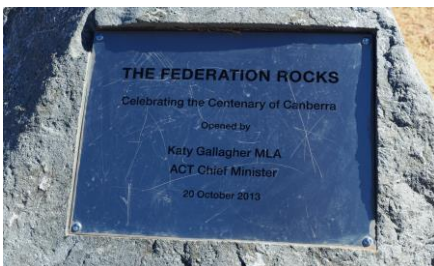
National Rock Garden, Canberra, ACT.

The idea of a National Rock Garden was first discussed by members of the Geological Society of Australia in 2008. Recognising that Canberra was already home to other 'nationals' such as the National Botanic Gardens, the National Zoo & Aquarium and the National Library, then why not a National Rock garden? So we talked to people – not just geologists, but people from all walks of life – about having large, iconic rocks from all over Australia, displayed in a park-like setting in Canberra. The response was uniformly enthusiastic. "What a great idea", people said.

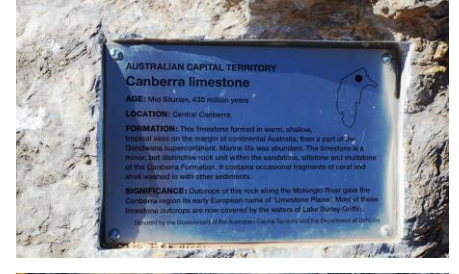
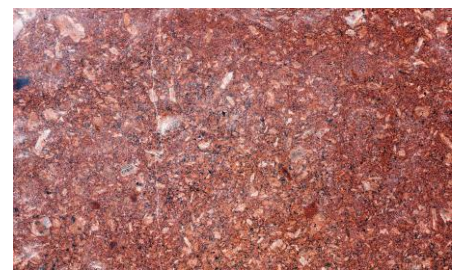
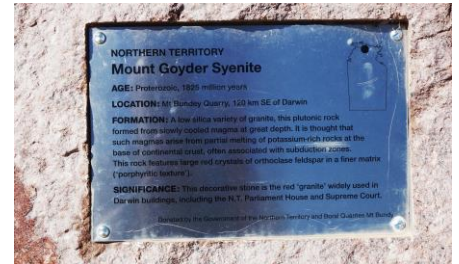
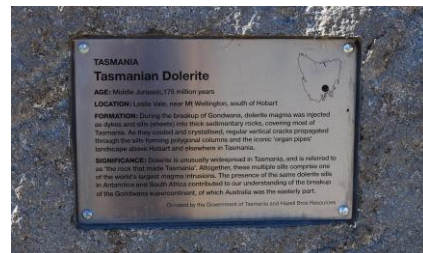
The next step was to find a home for the NRG and, noting that there was apparently some 'vacant' land on the western foreshores of Lake Burley Griffin, in 2009 we approached the National Capital Authority. Could we have a few acres for the NRG? Our timing was perfect – the NCA was in the process of developing a master plan for reinvigorating the Lindsay Pryor National Arboretum which had been somewhat neglected for many years, and the NRG seemed a perfect fit for an adjoining six hectare site. We therefore received a very positive response from the NCA.

In July 2010, at the Australian Earth Sciences Convention in Canberra, the National Rock Garden was officially launched by the CEO of the National Capital Authority, Gary Rake, and in April 2011, the NRG site was gazetted as a National Monument by the Hon Simon Crean MP.

The list of rock specimens to be displayed is extensive and each will be added to the existing collection gradually.



Ian and Janet are seen viewing the collection. The display will be quite extensive when completed.



Ian, Janet, and Mel attended the Canberra Rock Swap - March 2015. Their visit to Canberra places of interest continued...

Text extract taken from:
http://en.wikipedia.org/wiki/National_Arboretum_Canberra

National Arboretum, Canberra, ACT.

The *National Arboretum Canberra* is a 250-hectare (618 acre) arboretum in Canberra, the national capital of Australia, created after the area was burned out as a result of the Christmas 2001 and 2003 Canberra bushfires.

The Himalayan Cedar forest lost about one third of its trees, and the commercial Radiata Pine plantation was burned out, allowing the arboretum to be created.

In 2004, the Government of the Australian Capital Territory held a nation-wide competition for an arboretum, which was to be part of the recovery from the 2003 bushfires. The winning design by landscape architects Taylor Cullity Lethlean and architects Tonkin Zulaikha Greer proposed 100 forests and 100 gardens focusing on threatened, rare, and symbolic trees from around the world.

The site has been planted since 2005, and includes ceremonial trees planted by visiting heads of government and ambassadors. It was officially opened in February 2013.



Ian and Janet taking in the panorama of Canberra.



Looking East over Canberra.



Leaving the Cedar Forest.



Looking at the SW expansion of Canberra.



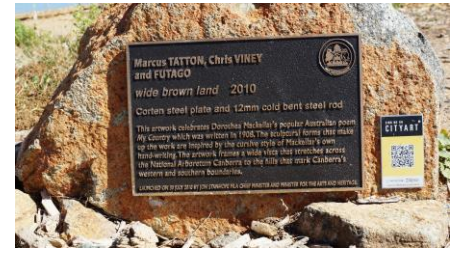
Looking South over South East Canberra.



Looking West over the Arboretum Cafe.



What a beautiful spot for a barbeque!



The plaque describes the iron artwork seen nearby as follows, 'This artwork celebrates Dorothea Mackellar's popular Australian poem *My Country* which was written in 1908...'



There is much more to see at the arboretum; maybe next time we visit Canberra.

Ian, Janet, and Mel attended the Canberra Rock Swap - March 2015. Their visit to Canberra places of interest continued...

Extract taken from: <http://www.telstratower.com.au/>

Telstra Tower, Canberra, ACT.

Telstra Tower is Canberra's iconic telecommunication tower rising 195.2 meters above the summit of Black Mountain in Australia's capital city. It is not only a landmark and one of Canberra's most visited tourist destinations but also offers 360 degree panoramic views of Canberra and its surrounding countryside from an indoor observation deck, two outdoor viewing platforms and the Tower's revolving restaurant.

As well as the telecommunications facilities the tower also has a café with Canberra's best views, a Conference Centre offering spectacular outlooks and state of the art AV. The lower level of the Tower's entrance foyer, houses the Telstra Heritage Exhibition which traces the history of Australian telecommunications as well as a theatre showcasing a video, produced shortly after the Tower opened in 1980 on the tower's design and construction.

FYI: The Tower has won two awards for outstanding design, the first was in 1979 when the Tower was nearing completion, it was for imaginative and effective use of concrete in a building, and then in 1980 it won the Civic Design Award of the ACT Chapter of the Royal Australian Institute of Architects.

Photo gallery continued next page...



Mel, 'That's close enough!'



Janet, 'Come on Mel! By the way, how's your vertigo?'



What a view; for those who can stand near the edge.



Looking East.



Looking South East.



Looking South West.

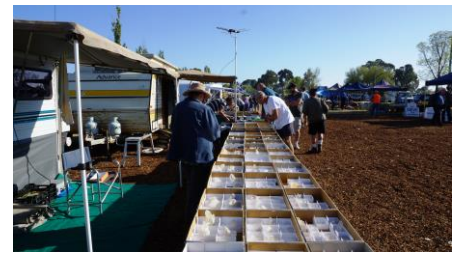


Looking West over the Arboretum.

Ian, Janet, and Mel attended the Canberra Rock Swap - March 2015. Ian had a very successful stall. Weather and buyers ✓✓✓.



Day traders looking South and on the right the Rock Swap Convener: Norm Menadue.



Busy Friday.



Buyers take their time and thoroughly scrutinise each mineral specimen before making final selections.



Still selecting.



Still selecting and about to be joined by others.



Day traders looking North.



Linda and Greg's stall in the distance (far left) and Gary Farnham's stall near right.

Text extract from Wikipedia...

[Timeline of Adelaide History](#)

Adelaide Events from 1900 to 2013

Early 1900s

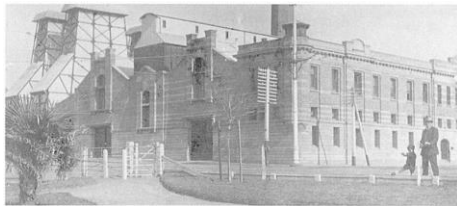
1900: First electricity station opened in South Australia at Grenfell Street. Electric street lights first appear.

1901: Adelaide became a state capital upon the establishment of the Commonwealth of Australia on 1 January. The Duke and Duchess of York visited.

1904: Adelaide Fruit and Produce Exchange opened in the East End.

1908: Outer Harbor opened. Adelaide High School established.

1909: Electric tram services began.



Grenfell Street Power Station.

1910s

1912: The Verco Building, an early 'skyscraper', is built on North Terrace.

1913: The first metropolitan abattoir opens.

1915: Liquor bars close at 6pm following a referendum.

1917: German private schools are closed. The first trains travel to Perth following completion of the East-West continental railway.

1919: Adelaide is awarded official city status and Mayor Charles Richmond Glover becomes the first Lord Mayor.

1920s

1924: Radio broadcasting begins.

1925: The Wayville Showgrounds open.

1927: The North-South railway is extended. The Duke and Duchess of York visit.

1929: The electric tram service to Glenelg commences.



Glenelg Tram - 1st public test run, 13th Dec 1929

1930s

1931: The Beef Riot: 17 people were injured when unemployed men clash with police while protesting the decision to remove beef from the dole ration.

1932: Local government is overhauled when Government redefined boundaries and names and abolished others.

1930s continued...

1933: First John Martins Christmas Pageant.



Rundle Street crowd outside John Martins waiting for Father Christmas - 1933.

1935: Many German place names, which had been changed during the Great War, were restored.

1936: Centennial Park Cemetery opens. Grand celebrations were held to celebrate South Australia's Centenary.

1937: First trolley bus services commenced. First permanent traffic signals were installed. Mount Bold Reservoir was opened. Outbreak of poliomyelitis.

1938: South Australian Housing Trust completed its first dwelling.



Trolley bus in front of John Martins, Rundle Street Christmas 1939.

1939: Worst heat wave was recorded with disastrous bushfires and highest Adelaide temperature of 46.1 Celsius. New Parliament House was opened on North Terrace by the Governor-General of Australia, Lord Gowrie. Carrick Hill, home to Edward (later Sir Edward) and Ursula Hayward, was completed.

1940s

1940: Birkenhead Bridge was opened. Secondary industry was rapidly expanded throughout Adelaide region and South Australia at large as the war-effort intensified.

1942: Rationing of tea and clothing was introduced. Race sport and bookmaking was banned.

1943: Rationing of butter was introduced. Racing was re-allowed.

1944: Rationing of meat was introduced.

1945: Gas and electricity restrictions were imposed.

1947: Orchards were ripped up following the discovery of fruit fly in the metropolitan area.

1948: Clothing and meat rationing was abolished. Glenelg jetty was destroyed and widespread damage was caused by severe storms.

1940s continued...

1948: Holden began production.



Holden Prototype Car No. 1, made in 1946. Photo: Dragi Markovic.

1950s

1950: Petrol, butter and tea rationing was abolished.

1954: Adelaide was hit by a severe earthquake on 1 March. Queen Elizabeth II made her first sovereign visit to Adelaide. Mannum-Adelaide pipeline was completed; pumping water from the River Murray to metropolitan reservoirs. The Queen Elizabeth Hospital, located in the western suburb of Woodville South, was opened.

1955: Adelaide Airport at West Beach was opened. Satellite city of Elizabeth was officially proclaimed. Redhen railcars made their first appearance on Adelaide's suburban rail network.



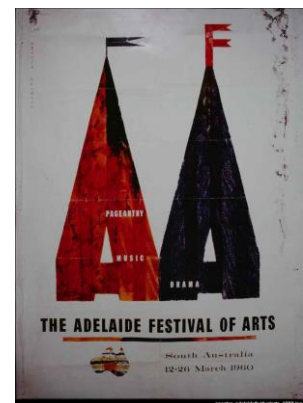
'Redhen' railcar introduced in 1955.

1958: Queen Elizabeth, the Queen Mother, visited Adelaide. First parking meters installed. South Para Reservoir opened and connected to Adelaide water supply. Last street tram removed, leaving only the Glenelg Tram service.

1959: Television broadcasting commenced, with NWS-9.

1960s

1960: First Adelaide Festival of Arts was held.



Banner for first Adelaide Festival of Arts 12-26 March 1960.

1960s continued...

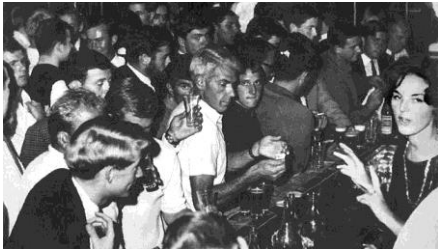
1962: Myponga Reservoir opened and connected to Happy Valley Reservoir.

1963: Port Stanvac oil refinery began operations. Queen Elizabeth II visited.

1964: Record wind gust of 148 kilometres per hour noted in Adelaide.

1966: Flinders University was opened at Bedford Park by the Queen Mother. Happy Valley Reservoir pipeline was extended.

1967: Wowserism went into decline. Lotteries commenced in South Australia. Liquor trading hours was extended. Torrens Island power station began operations. First stage of the South Eastern Freeway was opened.



Six o'clock swill not long before liquor hours were extended in 1967.

1969: Natural gas pumped from Moomba to Adelaide through 832-kilometre pipeline. Glenelg Jetty rebuilt.

1970s

1970: South Australia was the first state to reform abortion laws.

1971: Fluoridisation of water supply was implemented. The Age of majority was reduced to 18 from 21.

1973: Modbury Hospital was opened. The Dunstan Labor Government was returned to Government and commenced extensive social reforms. Adelaide Festival was opened.



Main entrance to the Modbury Hospital.

1974: Prince Phillip, the Duke of Edinburgh, visited Adelaide. First match of the new South Australian National Football League was held at West Lakes. South Australian Railways was split into two new entities, Australian National and State Transport Authority.

1975: The International Equestrian Exposition was held in Adelaide, attended by Princess Anne, The Princess Royal. The City of Adelaide Plan adopted by the City Council.

1976: Radio 5AA began broadcasting. The Liberal Movement is founded in Adelaide. Rundle Mall, Australia's first pedestrian mall was opened between King William and Pulteney streets.

1970s continued...

1977: Queen Elizabeth and Prince Philip visited Adelaide, with the Queen opening the Adelaide Festival Centre. Late night shopping commenced. The first of 307 Volvo B59 buses entered service with State Transport Authority.

1978: The suburban rail network was extended south to Noarlunga Centre, while the Semaphore line was closed.



Photo by Andrew Heslop. The old Red Hen at Semaphore.

1980s

1980: Thirty-five homes were destroyed in an Adelaide Hills bushfire. New 'Jumbo' railcars enter service on Adelaide's rail network. Mitsubishi Motors purchased Chrysler Australia. The Constitutional Museum opened.

1981: Prince Charles, The Prince of Wales, visited Adelaide.

1982: International air services to Adelaide began, flown by Qantas and Singapore Airlines. Coldest minimum temperature was recorded in June (-0.4° Celsius)

1983: The Prince and Princess of Wales visited Adelaide. The Ash Wednesday fires razed the Adelaide Hills; claimed twenty-eight lives throughout the state. Wendy Chapman was elected the first woman Lord Mayor of Adelaide.

1984: The population of Adelaide reached 1 million people. Keswick Railway Terminal was opened. The Indian Pacific, Trans Australian, and The Ghan make their first run into Adelaide.



Keswick Railway Terminal now called Adelaide Parklands Terminal.

1985: The Adelaide Casino was opened in the Adelaide Railway Station as part of the multi-million dollar Adelaide Station and Environs Redevelopment. The first Australian Grand Prix was held on the Adelaide Street Circuit. RMS Queen Elizabeth II visited Adelaide for the first time.

1980s continued...

1986: Queen Elizabeth II and Prince Philip visited Adelaide. Pope John Paul visited Adelaide and held Mass for a gathering of hundreds of thousands in the Adelaide Parklands. The South Australian Maritime Museum was opened. South Australia celebrated its Jubilee, 150 years since settlement. O-Bahn Busway was opened.



O-Bahn Busway.

1987: The Collins class submarine contract was awarded to the Australian Submarine Corporation at Outer Harbor. The Adelaide Convention Centre was opened on North Terrace. New 3000 class railcars entered service on Adelaide's rail network.

1988: The Prince and Princess of Wales visited Adelaide. Adelaide's tallest building State Bank Building was opened. Red light cameras were introduced. East End Markets were closed. Australia's first hospitality college opened in Adelaide. Port Dock Railway Museum was opened at Port Adelaide.

1989: The Bicentennial Conservatory was opened in the Botanic Gardens. The O-Bahn Busway was extended to Modbury.



The O-Bahn Busway - Modbury Terminal.

1990s

1990: New \$1.3 million organ was installed at the Adelaide Town Hall. Adelaide was recommended as a site for the Multi-Function Polis. Country rail passenger services from Adelaide were axed by Australian national.



Adelaide Town Hall Organ.

1990s continued...

1991: The University of South Australia was formed from a merger of several institutions. The \$40 million Adelaide Entertainment Centre was opened. Dame Roma Mitchell became Governor of South Australia, the first woman to hold the position in any Australian state.

1992: Final marker to the 1200 kilometer Heysen Walking Trail was positioned. Bid for the 1998 Commonwealth Games was lost to Kuala Lumpur.

1993: Poker machines were installed for first time in South Australia. Heysen Trail was officially opened 4th April, 1993.



Adelaide Poker Machines.

1994: Sunday trading was introduced to the city centre. High-speed ferry service began from Glenelg to Kangaroo Island.

1995: United Water is contracted to manage Adelaide's water and sewerage systems. The Local Government (Boundary Reform) Act, 1995 passed to encourage municipal amalgamations, resulting in an overhaul of local government. The last Australian Grand Prix held in Adelaide, future events to be held in Melbourne.

1997: The world's longest reversible one way freeway, the Southern Expressway is opened. Adelaide Crows football club win the AFL Grand Final. Port Adelaide Football Club joins the Australian Football League.

1998: Adelaide Crows football club win the AFL Grand Final for the second time.

1999: First Tour Down Under held.



Event associated with South Australian Tour Downunder.

2000s

2000: All government bus operations handed to private operators, buses, and infrastructure still government owned. Heysen Tunnels in Adelaide Hills were opened.

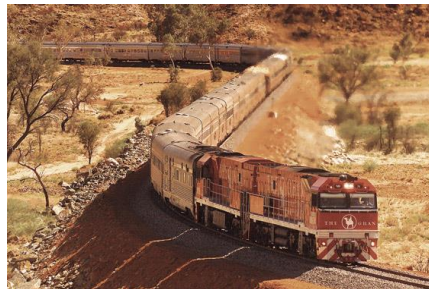
2001: Construction of Alice Springs-Darwin track started. The National Wine Centre of Australia opened in the East Parklands.

2002: Queen Elizabeth II and Prince Philip visited Adelaide. First low floor bus entered service on the O-Bahn Busway.

2000s continued...

2003: The Transcontinental Railway Line from Adelaide to Darwin was completed.

2004: Port Adelaide Football Club wins the AFL Grand Final. Trains travel from Adelaide to Darwin for the first time.



The Ghan.

2005: Adelaide Airport's new T1 terminal is opened. Port River Expressway opened.

2007: World Police and Fire Games were held in Adelaide. Adelaide-Glenelg tram service is extended to North Terrace (City West).

2008: Record breaking heat wave set in March. RMS Queen Elizabeth II visits Adelaide for the last time. Electrification of suburban rail network announced.



RMS Queen Elizabeth II.

2009: Temperature reaches 45.7° Celsius on January 30. Lance Armstrong Rides In the Tour Down Under

2010s

2010: MS Queen Victoria visited Adelaide for the first time on 23 February. RMS Queen Mary2 visited Adelaide for the first time on 11th March. Adelaide-Glenelg tram service was extended to Adelaide Entertainment Centre. Northern Expressway was constructed. Stephen Yarwood was elected new Lord Mayor of Adelaide. Almost 70mm of rain fell on Adelaide on 7th December, breaking the daily record.



RMS Queen Victoria.

2010s continued...

2011: RMS Queen Mary2 visited Adelaide on 20th February.



RMS Queen Mary2.

2012: US Secretary Of State Hillary Clinton visited Adelaide. Construction began on the South Road Superway. Emirates began direct flights to Dubai on 1st November.

2013: South Australian Health and Medical Research Institute (SAHMRI) opened 29th November.



South Australian Health and Medical Research Institute.



Male or female?

You might not have known this, but a lot of non-living objects are actually either male or female. Here are some examples...

Egg Timers: Egg timers are female, because over time all the weight shifts to the bottom.

Freezer Bags: They are male, because they hold everything in, but you can see right through them.

Hammers: Male, because in the last 5000 years, they've hardly changed at all and are occasionally handy to have around.

Hot Air Balloons: Also a male object, because to get them to go anywhere, you have to light a fire under their arse.

Photocopiers: These are female, because once turned off; it takes a while to warm them up again. They are an effective reproductive device if the right buttons are pushed, but can also wreak havoc if you push the wrong buttons.

Remote Control: Female, because it easily gives a man pleasure, he'd be lost without it, and while he doesn't always know which buttons to push, he just keeps trying.

Sponges: These are female, because they are soft, squeezable, and retain water.

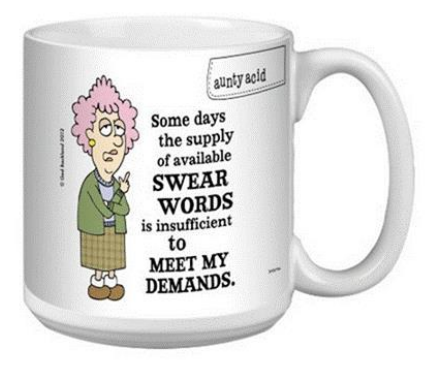
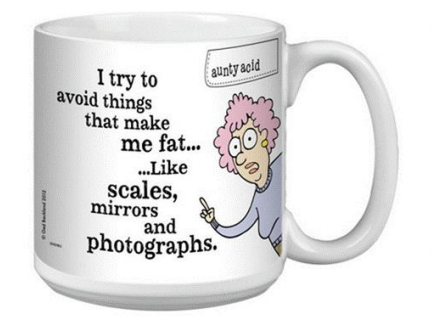
Trains: Definitely male, because they always use the same old lines for picking up people.

Tyres: Tyres are male, because they go bald easily and are often over inflated.

Web Pages: Female, because they're constantly being looked at and frequently getting hit on.

Contributed by June...

aunty acid's mug shots



Contributed by Claudia...

Rules that **Guys** wish **Girls** knew

- 1) If you think you are fat, you probably are. Don't ask.
- 2) Learn to work the toilet seat: if it's up put it down.
- 3) Don't cut your hair and then ask us how we like it; ever.
- 4) If you ask a question you don't want an answer to, then expect an answer you don't want to hear.
- 5) Sometimes we're not thinking of you. Live with it.
- 6) Don't ask what we're thinking about unless you are prepared to discuss such topics as tinnies, top tits, and fast cars.
- 7) Shopping is something we will never enjoy.
- 8) Anything you wear is fine. Really!
- 9) Crying is blackmail. Use it if you must, but don't expect us to like it.
- 10) Your brother is an idiot, your ex-boyfriend is an idiot, and your father probably is too.
- 11) Ask for what you want. Subtle hints don't work.
- 12) Yes, peeing standing up is more difficult than peeing from point plank range. We're bound to miss sometimes.

- 13) Most guys own two or three pairs of shoes. What makes you think we'd be any good at choosing which pair out of thirty would look good with your dress?
- 14) 'Yes' and 'No' are perfectly acceptable answers.
- 15) A headache that lasts 17 months is a problem. See a doctor.
- 16) Your mum doesn't have to be our best friend.
- 17) Don't give us 50 rules when 25 will do.
- 18) Don't fake it. We'd rather be ineffective than deceived.
- 19) Anything we said 6 or 8 months ago is inadmissible in an argument. All comments become null and void after seven days.
- 20) If you don't dress like Victoria's Secret Girls, don't expect us to act like soap opera guys.
- 21) If something we say can be interpreted in two ways, and one of the ways makes you sad and angry, we meant the other one.
- 22) Let us perve. If we don't look at other women how can we know how pretty you are?
- 23) Don't rub the lamp if you don't want the genie to come out.
- 24) You can either ask us to do something **OR** tell us how you want it done - **NOT BOTH**.
- 25) Christopher Columbus didn't need directions, and neither do we.
- 26) Women wearing **Wonderbras** and low cut blouses lose the right to complain about having their breasts stared at.



Contributed by Doug Hughes...

Blonde Twins

The other day my neighbour, who is blonde, came running up to me in the driveway just jumping for joy! I didn't know why she was jumping for joy. I thought, what the heck, and I started jumping up and down along with her. She said, "Sally, I have some really great news!" I said, "Great. Tell me why you're so happy." She stopped jumping and, breathing heavily from all the jumping up and down, told me that she was pregnant! I knew that she had been trying for a while so I told her, "That's great! I couldn't be happier for you!" Then she said, "There's more". I asked, "What do you mean 'more'?" She said, "Well, we are not having just one baby. We are going to have twins!" Amazed at how she could know so soon after getting pregnant, I asked her how she knew. She said, "That was the easy part. I went to Aldi and they actually had a home pregnancy kit in a twin-pack. Both tests came out positive!"

Members Notice Board

Meeting Reminders/Updates

- The Tea Tree Gully Gem and Mineral Club Exhibition will be a biennial affair, held on the opposite year to the Enfield show, that is, the next TTGMC Exhibition will be held on Saturday 20th and Sunday 21st of June, 2015.

Wanted

Mineral photo opportunities.

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

Do you have mineral specimens 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.

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.

Mel Jones

08 8395 1792

mel.jones@bigpond.com

Newsletter Content & Contributions

Contributions for the newsletter need to be passed on to me no later than one week before each club meeting.

As the current caretaker for the club newsletter, I will be emailing members a link to the copy on the Monday prior to the meeting.

Please consider contributing some of your photos and stories for all to enjoy. These do not have to be mineral related.

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.

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

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

Murraylands Gem and Mineral Club Inc: <http://www.murraylandsgmc.org.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>