











**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.**  
**President:** Ian Everard. 0417 859 443 Email: [ieverard@bigpond.net.au](mailto:ieverard@bigpond.net.au)  
**Secretary:** Claudia Gill. 0419 841 473 Email: [cjrgill@adam.com.au](mailto:cjrgill@adam.com.au)  
**Treasurer:** Russell Fischer. Email: [rfischer@bigpond.net.au](mailto:rfischer@bigpond.net.au)  
**Membership Officer:** Augie Gray: 0433 571 887 Email: [teatreegullygmc@gmail.com](mailto:teatreegullygmc@gmail.com)  
**Newsletter/Web Site:** Mel Jones. 0428 395 179 Email: [teatreegullygmc@gmail.com](mailto:teatreegullygmc@gmail.com)  
**Web Address:** <https://teatreegullygemandmineralclub.com>

**December  
Edition  
2018**

## "Rockzette" Tea Tree Gully Gem & Mineral Club News

President's Report	General Interest	Club Activities / Fees								
<p>Hi All, I would like to wish everybody a Merry Christmas and a Happy New Year. Cheers, Ian.</p>	<p><b>Pages 2 to 4:</b> Augie's December 2018 Agate and Mineral Selections...</p>  <p><b>Pages 5 &amp; 6:</b> Ian's 2018 Agate Creek finds – Part 3...</p>  <p><b>Page 7:</b> Mineral Matters – (1) Rainbow Lattice (2) Septarian Geodes...</p>  <p><b>Pages 8 &amp; 9:</b> Bird-In-Hand Mine ...</p>  <p><b>Pages 10 &amp; 11:</b> DIY - Cardmaking...</p>  <p><b>Pages 12 to 15:</b> 'Newcastle and Rail – The Never-ending Story'</p>  <p><b>Page 16:</b> 'The Staffordshire Haul'...</p>  <p><b>Pages 17 to 20:</b> More members' pictures, humour, Member's Notice Board, show details, Greg's advert &amp; resumption details for 2019.</p>	<p><b>Meetings</b> Club meetings are held on the 1<sup>st</sup> Thursday of each month except January. Committee meetings start at 7 pm. General meetings - arrive at 7.30 pm for 8 pm start.</p> <p><b>Library</b> <i>Librarian - Augie Gray</i> 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.</p> <p><b>Tuesday Faceting/Cabbing</b> Tuesdays - 10 am to 2 pm. All are welcome. Supervised by Doug Walker (7120 2221).</p> <p><b>Wednesday Silversmithing</b> Wednesdays - 7 pm to 9 pm. All are welcome. Supervised by Augie Gray (8265 4815 / 0433 571 887).</p> <p><b>Thursday Cabbing</b> Thursdays - 10 am to 2 pm. All are welcome. Supervised by Augie Gray (8265 4815 / 0433 571 887).</p> <p><b>Friday Silversmithing</b> Fridays - 9 am to 12 noon. All are welcome. Supervised by John Hill (8251 1118).</p> <p><b>Faceting/Cabbing/Silversmithing Fees:</b> A standard fee of \$3.00 per session applies – to be paid to the session supervisor.</p> <p>In the interest of providing a safe working environment, it is necessary to ensure everyone using the workshops follow the rules set out in <i>Policy No. 1 - 20/11/2006</i>.</p> <p>It is necessary that <i>Health and Safety</i> regulations are adhered to always.</p> <p>Everyone using the workshop must ensure:</p> <ul style="list-style-type: none"> <li>• that all club equipment (e.g. magnifying head pieces, faceting equipment, tools, etc.) used during the session, is cleaned, and returned to the workshop after usage.</li> <li>• that all work stations are left in a clean and tidy state;</li> <li>• that all rubbish is removed and placed in the appropriate bin;</li> <li>• and where applicable, machines are cleaned and oiled or dried.</li> </ul> <p><i>NOTE: The Tea Tree Gully Gem &amp; Mineral Club Inc. will not be held responsible or liable for any person injured while using the club machinery or equipment.</i></p> <p><b>Club Subscriptions:</b></p> <table style="width: 100%; border: none;"> <tr> <td>\$25.00 Family</td> <td>\$20.00 Family Pensioner</td> </tr> <tr> <td>\$15.00 Single</td> <td>\$12.50 Single Pensioner</td> </tr> <tr> <td colspan="2">\$10.00 Joining Fee</td> </tr> </table>	\$25.00 Family	\$20.00 Family Pensioner	\$15.00 Single	\$12.50 Single Pensioner	\$10.00 Joining Fee			
\$25.00 Family	\$20.00 Family Pensioner									
\$15.00 Single	\$12.50 Single Pensioner									
\$10.00 Joining Fee										
Diary Dates / Notices										
<p><b>Happy Birthday</b></p> <p>Members celebrating December birthdays:</p> <table style="width: 100%; border: none;"> <tr> <td>8<sup>th</sup> – Granton Edwards.</td> <td>10<sup>th</sup> – Blue Higgins.</td> </tr> <tr> <td>8<sup>th</sup> – Kevin Hannam.</td> <td>10<sup>th</sup> – Doug Walker.</td> </tr> <tr> <td>9<sup>th</sup> – Peter Rothe.</td> <td>22<sup>nd</sup> – John Hill.</td> </tr> <tr> <td></td> <td>26<sup>th</sup> – Denise Edwards.</td> </tr> </table>  <p>TTGGMC 2018 Christmas Lunch will be on Sunday December 9<sup>th</sup> 12MD for 12.30AM start. <b>If you would like to attend but have not put your name on the Attendance Sheet, please phone Ian or Augie.</b> As in previous years, places will only be set for the number of people on the Attendance Sheet. In the meantime, a Christmas Hamper is being organised to be raffled at the Christmas Lunch.  <u><b>All donations gratefully accepted.</b></u></p> <p style="text-align: center;">***</p> <p><b>NB. TTGGMC 2019 Biennial Exhibition</b>  <b>Saturday July 20<sup>th</sup> and Sunday July 21<sup>st</sup>, 2019.</b></p> <p style="text-align: center;">***</p> <p style="text-align: center;"><b>'Minerals for Mugs!'</b></p> <p>Ian is considering reintroducing his mineral identification course, 'Minerals for Mugs', in the new year. This course has been very popular in the past but has not been run for several years. It would be a daytime class on a Wednesday once a month at a time suitable for those interested. There are already 2 members committed. <b>If you would like to take advantage of Ian's vast expertise in minerals, please indicate your interest to him before we break up for Christmas.</b></p> <p style="text-align: center;">***</p> <p><b>See the last page for more club show details and member notices, dates for resumption of craft classes in 2019, etc.</b></p> <p style="text-align: center;">***</p>			8 <sup>th</sup> – Granton Edwards.	10 <sup>th</sup> – Blue Higgins.	8 <sup>th</sup> – Kevin Hannam.	10 <sup>th</sup> – Doug Walker.	9 <sup>th</sup> – Peter Rothe.	22 <sup>nd</sup> – John Hill.		26 <sup>th</sup> – Denise Edwards.
8 <sup>th</sup> – Granton Edwards.	10 <sup>th</sup> – Blue Higgins.									
8 <sup>th</sup> – Kevin Hannam.	10 <sup>th</sup> – Doug Walker.									
9 <sup>th</sup> – Peter Rothe.	22 <sup>nd</sup> – John Hill.									
	26 <sup>th</sup> – Denise Edwards.									
<p>The Tea Tree Gully Gem &amp; Mineral Club Inc. is not and cannot be held responsible or liable for any personal injuries, loss or damage to property at any club activity, including, but not limited to, meetings, field trips, all crafts and club shows. An indemnity is to be signed by all participants before each and every field trip activity they attend.</p>										
<p>Tea Tree Gully Gem and Mineral Club Incorporated, Old Tea Tree Gully School, Dowding Terrace, Tea Tree Gully, South Australia, 5091.</p>										

**Augie's December 2018 Agate Selections – Lake Superior USA/Canada.**

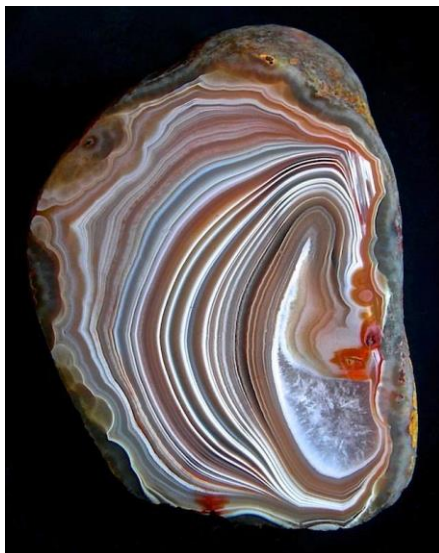
Extract taken from Wikipedia – The free Encyclopedia:  
[https://en.wikipedia.org/wiki/Lake\\_Superior\\_agate](https://en.wikipedia.org/wiki/Lake_Superior_agate)

**Lake Superior Agate - Description**

The Lake Superior agate is noted for its rich red, orange, and yellow colouring. This colour scheme is caused by the oxidation of iron. Iron leached from rocks provided the pigment that gives the gemstone its beautiful array of colour. The concentration of iron and the amount of oxidation determine the colour within or between an agate's bands. There can also be white, grey, black and tan strips of colour as well.

**Lake Superior Agate - Distribution**

One of the most appealing reasons for naming the Lake Superior agate as the Minnesota state gemstone is its general availability. Glacial activity spread agates throughout north-eastern and central Minnesota, north-western Wisconsin, Northern Iowa, Nebraska, Kansas and Michigan's Upper Peninsula in the United States and the area around Thunder Bay in North-western, Canada.



04 - Agate, Lake Superior, USA/Canada.



08 - Agate, Lake Superior, USA/Canada.



01 - Agate, Lake Superior, USA/Canada.



05 - Agate, Lake Superior, USA/Canada.



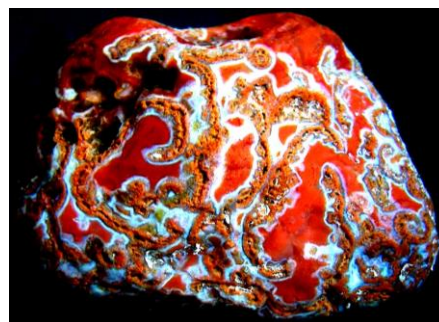
09 - Agate, Lake Superior, USA/Canada.



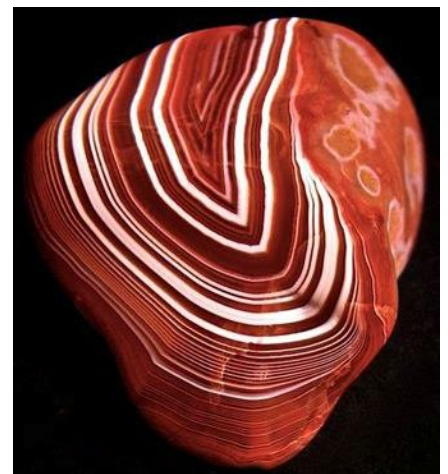
02 - Agate, Lake Superior, USA/Canada.



06 - Agate, Lake Superior, USA/Canada.



10 - Agate, Lake Superior, USA/Canada.



03 - Agate, Lake Superior, USA/Canada.



07 - Agate, Lake Superior, USA/Canada.



11 - Agate, Lake Superior, USA/Canada.

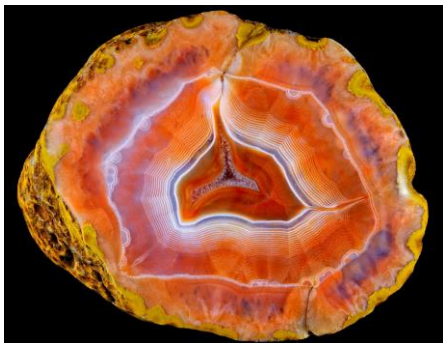


12 - Agate, Lake Superior, USA/Canada.

**Augie's December 2018 Agate Selections.**  
Continued...



13 - Agate, Lake Superior, USA/Canada.



14 - Agate, Lake Superior, USA/Canada.



15 - Agate, Lake Superior, USA/Canada.



16 - Agate, Lake Superior, USA/Canada.

**Augie's December 2018 Mineral Selections.**



Green Selenite - Pernatty Lagoon, Mount Gunson, South Australia.



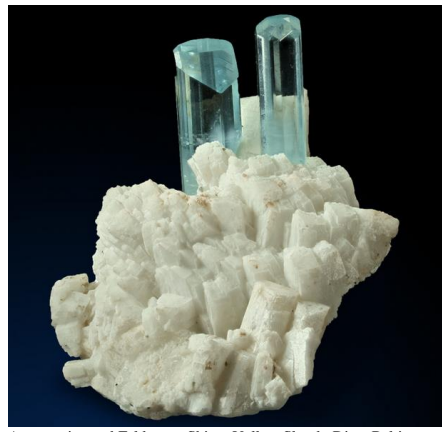
Adularia - Monte Prosa, Central St Gotthard Massiv, Tessin, Switzerland.



Amethyst - Piedra Parada, Mun. de Tatatila, Veracruz, Mexico.



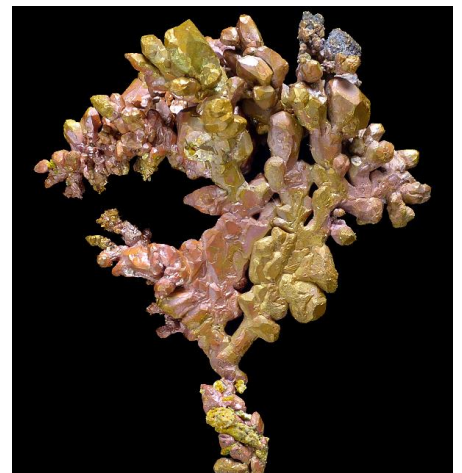
Aquamarine - Shigar Valley, Pakistan.



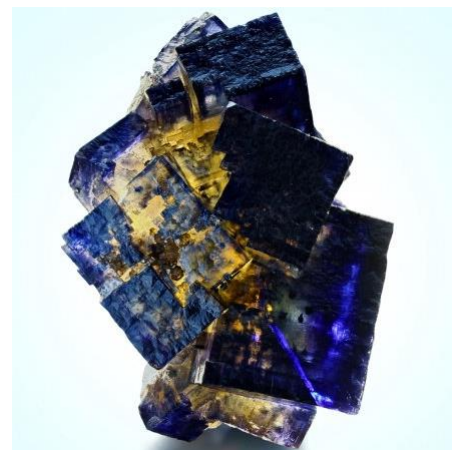
Aquamarine and Feldspar - Shigar Valley, Skardu Dist., Baltistan, Pakistan.



Calcite and Amethyst - Rio Grande do Soul, Brazil.



Copper - Bou Nahas, Oumjrane, Er Rachidia Province, Morocco.



Fluorite - Annabel Lee Mine, Illinois.



Manganoan Smithsonite - Tsumeb mine, Tsumeb, Namibia.

**Augie's December 2018 Mineral Selections.**  
Continued...



Fluorite on Milky Quartz - Riemvasmaak, Kakamas, Northern Cape Province, South Africa.



Garnet var Hessonite - Jeffrey mine, Québec, Canada.



Ludlamite and Siderite - 400m Level, Huanuni, Dalence Province, Oruro Department, Bolivia.



Orpiment on Barite - Quiruvilca District, Santiago de Chuco Province, La Libertad Department, Peru.



Pyrite concretion - Dongchuan Ore Field, Dongchuan District, Yunnan Province, China.



Rutile, Hematite and Chalcodony - Novo Horizonte, Bahia, Brazil.



Vesuvianite - Jeffrey Mine, Asbestos, Richmond Co., Quebec, Canada.

\*\*\*  
**Mel's December 2018 Facebook Sourced Mineral Selections**



Azurite with Malachite, Tsumeb Mine, Otjikoto Region, Tsumeb, Namibia. Source: Geology Page. Photo Copyright © Saphira Minerals.



Baryte, Clara Mine, Oberwolfach, Black Forest, Germany, Europe. Source: Geology Page. Photo Copyright © Crystal Classics.



Fluorite and Quartz var. Smoky, Göscheneralp, Uri, Switzerland. Source: Geology Page. Photo Copyright © Viamineralia /e-rocks.com



Vanadinite, Mibladen, Midelt, Khenifra Province, Morocco. Source: Geology Page. Photo Copyright © Saphira Minerals.



Azurite, Touissit, Oujda-Angad Province, Oriental Region, Morocco. Source: Geology Page. Photo Copyright © Anton Watzki Minerals.

\*\*\*

Contributed by Ian Everard (Note: the agate specimens are *sawn only...not polished*) ...

**Ian's 2018 Agate Creek Finds – Part 3.**



Agate, Crystal Hill, Agate Creek, Qld.



Agate, Crystal Hill, Agate Creek, Qld.



Agate, Crystal Hill, Agate Creek, Qld.



Agate, Crystal Hill, Agate Creek, Qld.



Agate, Back of the Saddle, Agate Creek, Qld.



Agate, Crystal Hill, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.



Quartz, Black Soil, Agate Creek, Qld.

*Continued next page...*



Quartz, Calcite and Fluorite, Black Soil, Agate Creek, Qld.



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



Quartz, Calcite and Fluorite, Black Soil, Agate Creek, Qld.



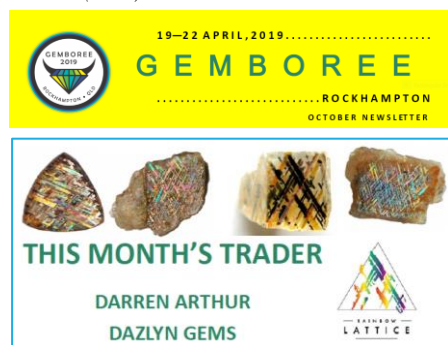
Quartz, Calcite and Fluorite, Black Soil, Agate Creek, Qld.



Quartz, Calcite and Fluorite, Black Soil, Agate Creek, Qld.

## Rainbow Lattice

Extract from the *GEMBOREE 2019 Newsletter* for October (2018).



Both the following links are worth looking at...

[www.rainbowlattice.com](http://www.rainbowlattice.com)

<https://www.facebook.com/rainbowlatticesunstone/>

Darren Arthur's business is aptly named *Dazlyn Gems* as he specialises in Rainbow Lattice Sunstone, one of Australia's most unique gemstones. As well as this specialty, Darren has other stones. He focuses on the finest qualities of colour, clarity, and cut with a range from the finest quality precious gems and rare, unusual stones to standard calibrated faceted stones and cabochons. He is also a gem cutter and a jewellery manufacturer and repairer. Darren has provided the following information about his speciality.

### Rainbow Lattice (One of the most unique gems on the planet)

A very rare gem found in only one very small area in Australia at Utrerengatye (Rainbow Caterpillar) Mine, Mount Riddoch Station, Harts Range, Northern Territory.



Harts Range, Northern Territory.

It was first discovered in late 1985 by Darren Arthur and Sonny Mason (dec) who happened upon it whilst scouting an area around an unlisted old abandoned Mica mine.

It was identified by the GIA who declared it a new gem variety in 1989 (see *Gems & Gemology* Vol XXV – Spring 1989). First tests described the lattice as Ilmenite, with recent tests proving it to be Magnetite as detailed in an article by Liu J., Shen A.H., Zhang Z., Wang C. and Shao T. (2018), 'Revisiting rainbow lattice sunstone from the Harts Range, Australia'. *Journal of Gemology*, Vol. 36, No. 1, pp. 44–52

### Rainbow Lattice Sunstone is a very unusual combination

Firstly, it is a type of Feldspar mineralogically known as a "Perthite". This variety is a true *MOONSTONE* which is made up of 75% Orthoclase  $K(Al, Si_3O_8)$  Potassium Aluminium Silicate and 25% Albite  $NaAlSi_3O_8$  Sodium Aluminium Silicate. Most of the material from our mine is moonstone (displaying Adularescence).

#### Features

**Adularescence** (moonstone effect also known as "schiller"). This phenomenon is due to a layer effect, where thin inner strata of two types of Feldspar intermix, *exsolution regions of Albite (sodium feldspar) in Orthoclase (potassium feldspar)*. These layers scatter light either equally in all spectral regions producing a white schiller. **Aventurescence** (sunstone effect) - Most of this material has at least some Hematite ( $Fe_2O_3$ ) that are small mainly yellow to deep orange platelets which can be hexagonal shape and are generally in one plane within the Feldspar. This effect is known as Aventurescence or Sunstone effect and gives most of the gem its orange glow.

**Iridescence** (rainbow effect) due to crystallographically oriented ex-solution crystals of Magnetite ( $Fe_3O_4$ ). These occur as blades or flat ribbon like strips and triangular platelets in one plane within the orthoclase structure. The Magnetite is opaque and metallic and can display iridescence due to oxidization of the Magnetite which in most cases has pseudo morphed into Hematite.

In each layer the lattice has changed direction (north/south), "like pages in a book with every second page upside down." This process is known as Lamellar twinning. The lattice arrangement is also referred to as "Sagenitic twinning". During the slow solidifying process of the Feldspar, excess iron and oxygen are drawn together and Magnetite starts forming. To form a three-dimensional octahedron, it is constrained within the layering of the Feldspar and therefore can only form in micron thickness. It forms within an octahedral plane which is an equilateral triangle and does not have enough material to form a large triangle, so it creates what can be described as a skeletal triangle across the Feldspar body.

#### Find Dazlyn Gems in The Walter Pierce Pavilion – DARR.

\*\*\*



Picture from Pinterest – Chandamar.

Contributed by Augie Gray...

### Utah Septarian Geodes

Septarian nodules are classified as *concretions*. The Septarians were formed during the Cretaceous period, some 50-70 million years ago when the Gulf of Mexico reached into what is now southern Utah. The decomposing sea life, which had been killed by volcanic eruptions, had a chemical attraction for the sediment around them, forming mud balls. As the ocean receded, the balls were left to dry and crack.

Because of their Bentonite  $((Na, Ca)_{0.33}(Al, Mg)_2(Si_4O_{10})(OH)_2 \cdot nH_2O)$  content they also shrank at the same time, trapping the cracks inside. As the decomposed Calcite from the shells was carried down into the cracks in the mud balls, Calcite crystals formed. A thin wall of Calcite was transformed into Aragonite ( $CaCO_3$ ) separating the Bentonite heavy clay exteriors from the Calcite centres. Because of this, the nodules are called *Septarians*.

The name Septarian is derived from the Latin name, *septem*, meaning seven. This relates to the fact that the mud balls cracked with 7 points in every direction, thereby creating the beautiful designs we see.

Septarians are composed of Calcite (the yellow centers), Aragonite (the brown lines) and the outer grey rock is Limestone. Occasionally the fossil or some of the fossils which started the formation of the rock is noticeable in the rock.



\*\*\*



Polished Pair of Septarian Nodule Geode - <https://www.spirit-crystal-cavern.com/listing/615192162/polished-pair-septarian-nodule-geode>

\*\*\*

Contributed by Doug Walker...

## The Bird-In-Hand Goldmine, Woodside, South Australia.

Extract from an article by Elisa Rose from the **Courier** 2018-10-31 page 36. <http://www.courier.net.au/wp/>

### Past Ground Water Issues Overcome – Gold Mine Step Closer

Mining company Terramin Australia is a step closer to finalizing an application to mine gold in Woodside, after “successfully” completing part of a water management trial at the site.

The company, which hopes to re-open the historical Bird in Hand gold mine, recently completed the first stage of the \$1.1m two-stage project, which trials the system that would be used to manage ground water if the mine was re-opened.

The Bird in Hand mine was established in the 1800s, producing 10,500 ounces (298kg) of gold in the 1880s.

But difficulty managing ground water resulted in its closure, with no significant mining undertaken there in the last century.

Some local landholders have opposed its re-opening for a number of reasons including that they believe it poses a threat to local primary producers who rely on bore water.

However, Terramin believes it can extract 252,000 ounces (7144kg) of gold – worth more than \$400m – from the mine, managing ground water using grouting and the managed aquifer recharge system, which reduces the flow of ground water into the mine shaft by sealing cracks and voids and re-injects leaked water back into the aquifer through bores. The two-stage project aims to validate the company’s groundwater modelling, which has been undertaken over several years and is informed by geological and hydrogeological data, groundwater census drilling and pumping tests.

The modelling has indicated that the aquifer is suitable for re-injecting water.

The completed stage of the project identified bores that were suitable for re-injecting water into the aquifer.

The second stage, which involves a water re-injection trial, will be carried out this year.

#### ‘Significant milestone’

Terramin chief executive Richard Taylor said the successful completion of stage one of the trial was a “significant milestone” in progressing the company’s mining lease application and “reduces ‘concerns initially expressed by community stakeholders and the regulator’”.

However, Inverbrackie Creek Catchment Group chair Jim Franklin-McEvoy, who is an opponent of the mine, said the water system was “highly variable”.

He said he remained sceptical about water management at the site and was looking forward to seeing the results of the project in more detail.

The project was requested by the State departments of Energy and Mining and Environment and Water.

Extract from the website of  <https://www.terramin.com.au/community/bird-hand-community/#faq>  
<https://www.terramin.com.au/project/bird-hand-gold-project/>



Bird-in-Hand Gold Project (Project) is situated on the site of the historic Bird-in-Hand gold mine, located 2.7km from Woodside in the Adelaide Hills, 30km east of South Australia’s capital city, Adelaide and 35km north of Terramin’s existing Angas Zinc Mine (Angas) at Strathalbyn.

#### History

The Bird-in-Hand mine was one of 17 gold mines in the Woodside goldfield which produced over 30,000 ounces between 1881 and 1889. The Bird-in-Hand mine was the largest of these mines producing 10,500 ounces of gold at an average grade of 12.9g/t in the late 1800’s. Mining at Bird-in-Hand ceased when a water fracture was intercepted by the underground miners, with the subsequent water inflows being uneconomic to manage with the 1880s’ technology. Mining interest and capital support then went to the newly discovered Broken Hill region and subsequently Bird-in-Hand mine was closed.



Bird in Hand Mine 1884. View looking west towards Winding House with tramway to Twenty Head Stamp Battery.

In late 2013, Terramin purchased the Project and with it a portfolio of highly prospective Adelaide Hills exploration tenements. Terramin revised and released a Bird-in-Hand Resource (2013 Resource) estimate of 557,000 tonnes at 13.0g/t gold for 233,000 ounces.

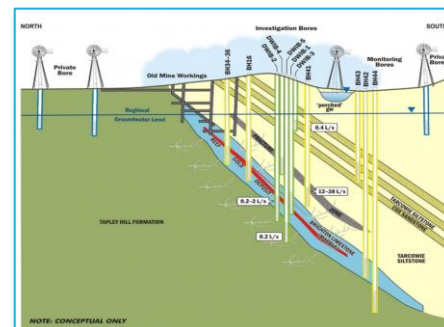
A Scoping Study on the high-grade Resource was completed by Terramin in early December 2013. The study confirmed that the Resource can be mined safely and economically. The proximity of the Project to Terramin’s existing mining and processing facilities at Angas allows for road haulage along existing sealed road infrastructure. Terramin plan to utilise their existing processing plant to produce gold doré and concentrate. The scoping study was based on underground access with a cut and fill mining method, flotation and gravity concentration, to produce doré and gold concentrate. No acid leaching or cyanidation will be used in the process.

Terramin plans to undertake mining on an owner/operator basis. Start-up capital costs are estimated to be approximately \$25.6m (including initial underground development).

Following the positive scoping study results, the Terramin Board approved the commencement of the preliminary feasibility study. This initiated extensive environmental and hydrological studies which are on the critical path for project approval and development prior to the commencement of infill drilling program to facilitate mine design.

A major concern for all stakeholders, particularly Terramin, is the impact a mining operation will have on the regional groundwater and possible effect on groundwater users. A study was commissioned with the assistance of specialist hydrogeological group; Australian Groundwater Technology (AGT). The groundwater study began with a review of all current and historical data relating to the regional groundwater and the Western Mount Lofty Ranges Water Allocation Plan. A groundwater and bore census is underway in co-operation with 37 local Landowners, which has included 58 bores to date. Groundwater loggers have been installed in a number of bores to accurately measure the impact of pre-mining activities throughout the varying stages of the irrigation cycle.

Following discussions with the Environmental Protection Authority (EPA), Department for Environment, Water and Natural Resources (DEWNR) and Department of State Development (DSD), approval was received to undertake construction of five investigation bores and pump testing of those bores to determine the interaction of groundwater, aquifers and rock structures. The bores were constructed in July 2014 and pump tests were conducted in August and December 2014 as well as February 2015. This work has shown that the majority of groundwater is confined to fractured rock zones which can be identified in the geological drilling.



Conceptual graphic showing the investigation wells installed in July 2014.

A conceptual groundwater model has been developed as a result of the ongoing groundwater census, pump testing of the investigation bores and private bores, and local surface water monitoring. Work will continue to develop the groundwater model, which will aid in the development of management techniques and mine design.

Other environmental work to date has included a flora and fauna study, which incorporated a field survey, conducted in October 2014.

Continued next page...



**The Bird-In-Hand Goldmine – Continued...**

The study area was assessed for native vegetation cover, presence of flora and fauna species (including listed species) and key threatening processes (pest plants and animals), which will assist in describing the ecological environment. Additionally, a survey of habitat values of scattered paddock trees was undertaken.

A total of 62 bird, 12 mammal, seven reptile and four amphibian species were recorded during the October 2014 survey. Ultimately, the study will help to inform Terramin of the potential impacts of mine construction and operations and develop appropriate measures to manage any impacts, as well as form a substantial element of the Environmental Protection and Biodiversity Act Referral.

Noise, dust and traffic monitoring will continue through 2015, and a surface soil assessment is planned for 2015.

In July 2015, Terramin purchased a strategic parcel of freehold land which will be suitable to support the surface infrastructure for the Project.

**Next Steps for Terramin**

Terramin has received approval from DSD for the next stage of investigation drilling. Drilling will provide material to undertake metallurgical test work and to enable completion of the mine design through understanding the geotechnical and hydrological properties of the rocks.

The potential to discover additional high-grade mineralisation further along strike on the Mineral Claim is highlighted by the presence of historic mines which could be accessed from the Bird-in-Hand underground infrastructure including; Bird-in-Hand Extended and The Ridge, which are respectively 200m and 400m to the south of Bird-in-Hand. These mines were last worked in the 1890's. The Ridge has a recorded production (incomplete) of 517 ounces of gold from 2,766 tonnes at an average grade of 5.8g/t gold from 5 shafts and more than 500m of drives. The recorded retreatment of 6,266 tonnes of The Ridge tails produced an additional 977 ounces (an additional 4.9 g/t bringing the average grade of The Ridge to 10.6g/t). Bird-in-Hand Extended had 1 shaft sunk to 30m and at least 80m of drives were developed. The lode was up to 6m wide and assayed samples averaged 25- 31g/t gold.

Terramin is currently working with all stakeholders to progress the Project to begin the staged approval process which leads to a Mining Lease approval.

For more information on the Project, [click here](#). To access the Project Information Fact Sheets, please [click here](#).

[Community Information Presentations](#) and [Newsletters](#)

[Community Feedback Form](#)

[Water Management Strategies](#)

\*\*\*

**Workshop - 13<sup>th</sup> November.2018**



(F-L-R) Augie, Cheryl & Allan. (B-L-R) Doug, Ken & Russell.



(F-L-R) Rodrick & Blue. (B) Betty.



(L-R) Betty, Blue & Jean.



(L-R) Rodrick, Betty & Blue.



(L-F-B) Allan, Cheryl, Augie & Betty. (R-F-B) Russell & Ken.



(F-L-R) Augie, Betty & Cheryl. (B-L-R) Allan, Ken & Russell.



(F-L-R) Cheryl, Betty & Augie. (B-L-R) Ian, Rodrick, Ken, Doug & Allan.



(F-L-R) Cheryl, Betty & Augie. (B-L-R) Rod, Ken, Doug & Allan.



(F-L-R) Blue & Jean. (B) Chris.



(L-R) Ian, Ken, Doug & Allan.

See more members' pictures on pages 15 and 17.

\*\*\*

DIY – Cardmaking contributed by Janet and Mel...

Extract via Pinterest:

<https://feltmagnet.com/crafts/10-tips-for-card-making-beginners-cardmaking-how-to>

## How to Make Cards

### 10 Beginner Tips – How to Make Cards



Author: Fabrizio Martellucci



Hot Air Balloon Card created by Fabrizio Martellucci

#### It's Easy to Get Started!

So, you've seen friends or a loved one making handmade greeting cards, and you want to give it a go but don't know where to start?

I've gathered ten quick tips for total cardmaking beginners to help you along the way. You don't have to follow all of them, and you can pick and choose the one that feels more 'comfortable' and within your reach.

So, if you feel overwhelmed by the whole paper crafting experience, do not despair, here's a quick list of the best ten tips for a head start in your card making.

#### Card Making Tips List

##### Tip #1 - A Little Goes a Long Way

Start small you don't need all the tools out there nor do you need a huge machine to start. A ruler, pair of scissors, a craft knife (careful they're sharp) and a self-healing cutting mat (glass ones are popular), is all you need to get started.

##### Tip #2 - Learn to Shop for Supply at Cheap Outlets

Check your dollar/pound store for bargains such as: non-patterned coloured papers or fancy papers, embellishments such as gems or glitter (go easy with them), pva glue. Go for neutral colours and avoid strong colours to start with as

it's more difficult to mix and match elements when there's no colour coordination.

##### Tip #3 - Stock up on Must Have Basics

Get at your local scrapbook store or online a few sheets of black and white textured (also called hammered) thick card stock for your matting for framing elements or paper. You will need also some strong cardstock to make your base card (basically the card where you put all the elements). Make sure that it has a good weight in lbs or GSM so that once you fold it in half, it can stand without toppling over.

##### Tip #4 - Check Out How Others Do It

Buy some card making magazines to get a feel and see the latest trends in cardmaking. You should find some readily titles easily at your local newsstand or newsagent, if they don't have any an international bookshop might do the trick as they usually carry international and specialised titles. I know for a fact that most magazines published in the UK are available in the major bookshop in the USA such as Barnes & Nobles, etc.

##### Tip #5 - Keep Looking for Inspiration

Follow a few card making blogs to see what cardmakers online are up to. You can search either on google using a combination of search terms such as 'cardmaking', 'blog', 'brand of a manufacturer' etc... or since Google retired their blog only search then use [blogsearchengine](#). Again, use any terms that has paper crafting connection, so you might come up with a few gems of blogs you will want to follow to get inspired.

##### Tip #6 - Suss the Zen Properties of Making Greeting Cards

Deconstruct cards that you see in magazines and online, basically try to see how the card was made: how many layers were used, where they've positioned the elements and how the cardmaker kept the greeting card proportion balanced. As you read more magazines and experience the making of greeting cards then you'll start to spot new ideas or new ways of doing things pretty quickly, you will know after a while, 'you're ready' when you'll look at a magazine and instantly recognise a technique and/or the supplies used (even the name of the manufacturers).

##### Tip #7 - Don't Get Lost Creating; Get a 'Map'

Visit Pagemaps or MojoMonday: these two websites release card sketches on a regular basis that can be easily followed and adapted with your current supplies to make great cards. Sketches/Map/Layouts are your blueprint giving you the freedom of picking from your existing supplies to create something you never thought doing. You'll get more adventurous and will improve your creativity and output. Just click on where it says 'card sketches' and you'll be taken to my other article about this subject.

##### Tip #8 - Some People Are More 'Show Me How' Types—Look at Videos Online

Follow video tutorials of paper crafting manufacturers online either on their own

websites or YouTube. It's a good idea to subscribe to a few to see how their tools or latest paper releases are used in cardmaking. This tip is especially useful for visual types who struggle to figure out written directions even aided with a picture, videos are basically self-explanatory, and I can't forget how many times a simple written instruction didn't make sense until I saw it 'happening' watching a video. You'll have your light bulb moments too when watching paper crafting and cardmaking tutorials online.

##### Tip #9 - Let Other Experienced Crafters Teach You the Ropes

Host a party! There are several companies (Fun Stampers' Journey, Stampin' Up and Close to My Heart) that use direct selling so if you're not sure you can get the expertise of the demo from that company to show you how to create fun cards and enjoy the company of your friends while doing it. Not only you'll also have the chance to ask again and again from the representative(s) how to go about using a specific technique or product since they're trained for doing that and won't mind being asked. Also, since they usually will have prepped a workshop for everyone to enjoy their time, you'll discover new ways of making handmade cards following the latest trends.

##### Tip #10 - Copy a Little and Add Your Own Twist

Finally find your own style, although you will like a lot of cards out there, try to 'scrap lift' the techniques and ideas but not the whole card design, just make it your own tweaking it. Don't be scared to experiment and see what feels natural to you, either by using a specific product or range or getting enamoured with a certain technique. Just make new styles or trends your own adding your personal touch. You'll get the satisfaction that you've created something totally—you!



#### YouTube Cardmaking Videos

To watch, Click/tap on video hyperlink...



[Back to basics Part 1 - Cardmaking for Absolute Beginners](#) by [ComeAndLearn](#)

[Back to basics Part 2 - Cardmaking for Absolute Beginners](#) by [ComeAndLearn](#)



Cardmaking continued next page...

How to Make Cards – Continued...

**More YouTube Cardmaking Videos**

To watch, Click/tap on video hyperlink...



[Cardmaking Back to Basics – The Beginning](#) by [lostinpaper](#)



[The Basics of Cardmaking 101](#) by [Maymay Made It Crafts](#)

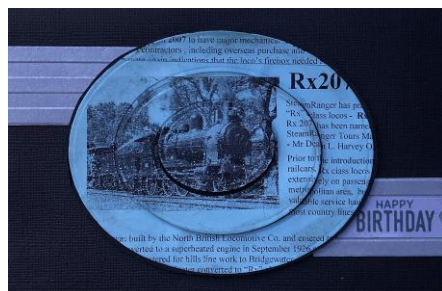
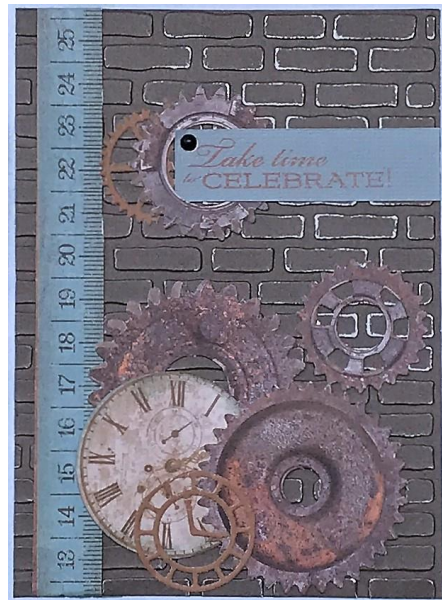


**Local and Website Sources for Cardmaking Materials**

- Big W stores.
- Browse In & Save stores.
- Cheap as Chips stores.
- Craft Giraffe...  
<https://www.craftgiraffe.com.au/page/faqs/>
- Kaisercraft...  
<https://www.kaisercraft.com.au/newsite/index.php>
- Lincraft Australia...  
<https://www.lincraft.com.au/store/>
- Local News Agents.
- Ned's, St Agnes Shopping Centre.
- Office Works stores.
- Paper Flourish...  
<https://paperflourish.com.au/>
- Riot Art & Craft store, Westfield TTP.



**Cards by Janet Jones**



\*\*\*

Contributed by Mel Jones...

## ‘Newcastle and Rail – The Never-ending Story’ by Garry Reynolds Part 4 of 20+...



The Newcastle City waterfront today where Aborigines once fished from canoes, convicts hewed coal and a railway system developed and disappeared over a period of 160 years. Source: *Familypedia*.



A remnant of the AA Company's first Fish Belly Railway line displayed in the Newcastle Museum, itself a former railway remnant – the Honeysuckle Workshops. The curve of the rail is likened to a fish belly and the rail is displayed upside down here. This rail installed in 1831, is like that used on the famous English Stockton to Darlington railway line of 1825. It is made of cast iron and hence quite brittle. Source: *ABC*.

### The Australian Agricultural Company

Today, the Australian Agricultural Company Limited (AA Co) is a Public Company that is ranked number 559 out of the top 2,000 companies in Australia. The Company generates most of its income from cattle raising and meat processing in the Northern Territory and Queensland. In 2017, it took in \$755 million in sales and other revenue. It owns and operates feedlots and farms covering around 7 million hectares of land, roughly 1% of Australia's land mass.

### So, what has it got to do with the railway heritage of Newcastle?

Well, despite its name, the Australian Agricultural Company certainly became a dominant player in the Newcastle coal industry in the 19th century, operating the first private and properly equipped colliery in Australia. It also constructed the first railway.

How it got there is a story of political intrigue and backroom deals at the highest level in England and the Colony of New South Wales, mixed with incredible barbarity towards its convict labourers to make huge profits for some of the wealthiest people in England.

### How did such an organisation gain such a substantial unchallenged foothold in New South Wales?

The AA Co was founded in 1824 through an Act of the British Parliament, with the right to select 1,000,000 acres (4,047 km<sup>2</sup>) – yes one million acres - in New South Wales for agricultural development. This largesse was unheard of at the time.

It was a flying start for the directors and shareholders receiving all that land for free to match their capital of a million pounds.

There was a condition, however, that a certain amount of money had to be spent on the development and improvement of the land the Company received under the Government's massive grant.

### So, who were some of these lucky directors and shareholders who were bestowed such a generous allotment by the British Government?

Surprise, surprise - among the principal members of the Company were the Attorney-General and the Solicitor-General of England; 28 Members of the British Parliament; the Governor, Deputy Governor and eight of the directors of the Bank of England; the Chairman and Deputy-Chairman and five directors of the British East India Company; and many other eminent bankers and merchants of England – basically the big end of town in government and business.

Of course, the British East India Company had a lot of experience in getting a "rail run" in its past colonial exploits supported by the British Government.

Essentially, a handful of privileged individuals received a magnificent package of benefits and incentives offered to no one else in the Colony of New South Wales or England.

Many people in New South Wales were flabbergasted and exceedingly unhappy – they smelt a rat. The cynicism and gathering outrage reached the point in 1825 that the 'Sydney Gazette' came out and said what nearly everybody was thinking, that the: "... company intends nothing more nor less than the enrichment of themselves at the expense of the colonists."

Certainly, the British Government was looking to attract private investment into the Colony of New South Wales as capital was scarce until the Gold Rushes in the 1850s when locomotive-based railways started to be constructed.

In the 1820-30s, NSW was evolving from a place of minimal government spending for maximum deterrence of crime in England, to a place which might be able to generate enough revenue to be self-sustaining while supplying raw materials to Great Britain as the head of the Empire.

The business plan of the AA Co was to commence operations with a view to building and improving flocks of Merino sheep in the Colony to generate exports of fine wool to

Great Britain. Additionally, it hoped to grow and export crops not readily achievable in England, such as sugar from cane and tobacco.

In the process, the Company said it would provide non-convict workers for the Colony at no cost to the Government and also take up a large number of convicts either clogging England's goals or underutilised in the Colony.

### So where was this magnificent act of land beneficence to raise these sheep to be located in the Colony?

The initial area selected under the AA Co founding charter extended from Port Stephens just above Newcastle, embracing the Karuah River Valley, to the Gloucester Flats, and to the Manning River at Taree – in all, 464,640 acres (1,880 km<sup>2</sup>).

The authorities and the AA Co were familiar with this area, as after the penal colony was established at Coal River (Newcastle) in 1804, prison escapees frequently followed the coastline north to Port Stephens and away from the authorities in Newcastle and Sydney. They would often try to procure a canoe from the Aboriginal people who had no allegiance to those clans helping the gaolers catch escapees at Newcastle. In fact, absconders to Port Stephens became so frequent, that the authorities stationed a party of soldiers to intercept the miscreants at what became known as Soldiers Point.

However, the Company discovered that while this may have been good country to disappear into if you were a criminal, it really wasn't ideal country for raising Merinos.

Management heads would eventually roll on this decision.

You see, when the newly appointed Commissioner of the Company, Robert Dawson, arrived from England in 1825 with 79 settlers, he plumped for the site of Port Stephens for future settlement and substantial Company investment over the recommendation of the Liverpool Plains by the experienced Colonial Surveyor General and explorer John Oxley.

Dawson was leant on in his decision by the advice of a Company-appointed local committee of advisors which was dominated by the famous wool family, the Macarthur's, who had used their connections in England to secure Dawson his position.

*Continued next page...*

### 'Newcastle and Rail – The Never-ending Story' *Continued...*

As the Advisory Committee saw the AA Co money rolling into establishing a major commercial pastoral and agricultural enterprise, and it had inside knowledge of the management processes and extraordinary leverage with the Company's Commissioner in NSW, it organised a scam.

At very high prices, the Committee's members foisted onto Dawson and the Company all the old and diseased sheep they could find in their own flocks!

When things got out of hand and the Company accountants' eyebrows were being raised back in London, in June 1827 Dawson wrote to James Macarthur heading up the local Advisory Committee: "I was no longer disposed to make the Company Grant a burial ground for all the old sheep in the colony".

The Macarthurs were unforgiving and white-anted Dawson through their extensive colonial and British networks to have him fired by the Company. They were experienced at this, already having helped to get rid of Governor Macquarie who impinged on their private interests.

Despite this fiasco, the Company was so well connected in the big end of London that it got a second free go. The AA Co was able to 'trade-in' this land at Port Stephens without penalty and take up the equivalent amount of land in the Murrurundi and Tamworth areas of the Liverpool Plains region which was now proving to be good Merino-raising country.

Just to rub in how well-connected the English directors and investors were to the British Government; the AA Co was able to get away with riding roughshod over the pioneering settlers of the area who'd 'done the hard yards' over a number of years setting up their farms there.

On behalf of the Company, the Colonial authorities ordered the original settlers off their land with the AA Co paying little compensation because of loopholes in the agreement under which the original settlers took up land offered by former Governors.

Of course, as a penal colony, the AA Co was able to receive a plentiful supply of convicts to work its new free land. The Company was not beyond severely exploiting this free convict labour to generate greater profits.

It was such a good deal for the AA Co, that when the supply of convicts was facing potential limits in the mid-1830s, the Company Directors even attempted to source convicts from the city-state of Hamburg in Europe to come to NSW to slave away on their properties. But wait there's more. In 1828, the Company was handed Newcastle's entire coal mining from the Government with no room for, let alone invitation, to other interests.

This was a culmination of events where the specially-appointed British Government Commissioner, Thomas Bigge, supported by the Macarthur family, organised for a Royal

Commission into the running of the Colony. He reported that the Government's Newcastle coal mining operation was "inefficient and troublesome" in 1822 and recommended privatisation.

When a cashed up well-connected organisation like the AA Co came along, the British Government leapt at the chance to offload the struggling Newcastle convict coal operation on highly favourable terms to the Company. Are we surprised anymore?

As if that wasn't enough of a leg-up, in 1833, the AA Co received prime land grants in the heart of what would become the inner suburbs of Newcastle totalling 1,920 acres (8 km<sup>2</sup>) for further coal mining. These included what we know today as Bar Beach, Cooks Hill, Hamilton, Broadmeadow, parts of the Newcastle Central Business District and the Hill to expand its business. Yes, here's more free crown land and resources for the Australian Agricultural Company on top of their original million acres.



Coal seam outcrops on the coast at Newcastle.  
Source: *Wattsupwiththat*.

However, over a period of time as the flow of convicts began to dry up from England and the old and decrepit ones were left on the Company's books, it was finding that the convict labour available was inefficient and insufficient to maximise its profits. The business plan was starting to unravel.

At this stage, after having such a sweet run, the AA Co balked at the alternative of actually paying free colonial labourers to undertake coal mining not only because of cost, but because the free labourers disliked underground work. They preferred jobs in the outdoors and there was plenty of that with the spread of settlement inland. Aside from that, the AA Co had a shocking reputation for the way it treated its workers. So, it began to finally deliver on its original commitment to recruit workers, especially miners, from Britain who would not have been fully aware of its reputation in a barbarous penal setting.

Just to make sure no other enterprise could muscle in on the act, the Company managed to get itself bequeathed a 31-year monopoly on the coal traffic out of Newcastle by the British and colonial based authorities to entrench its privileged position. Not a bad sling for the well-to-do shareholders in England, especially as the Government had spent considerable resources pioneering and setting up mining and building a settlement and port infrastructure, but its arcane bureaucracy always struggled to manage the business built on the desultory

efforts of the Colony's most recalcitrant convicts.

With free land and resources and considerable free labour and a Government guaranteed monopoly from competition, the AA Co was virtually handed a licence to print money in Newcastle. Yet it continued to treat its shrinking convict labour force abysmally.

Unbelievably, the AA Co had instituted even more appallingly conditions than the Government had done in creating a deterrent 'hellhole' for the worst of the worst convicts, decades earlier.

In those days, early on a Monday morning, the convict miners were lowered by bucket down the mine shaft to work by the light of small lamps and large fires. They would hand-pick chunks of coal from the wall often lying on their sides in the narrow seams. They had to fill wagons which were dragged to the bottom of the shaft for raising to the top.

The convicts ate and slept underground for the entire week until they were allowed up on Saturday to bathe in the sea. Afterwards, they were taken to the barracks. On a Sunday morning, religious services were observed, and punishment was dealt out with lashes for various offenses. On the following Monday morning, the convicts were brought back down the shaft for another week's work. Government convict mining was continued until 1823, when the Newcastle penal colony was closed.

If anything, conditions got worse under the rule of the rich directors of the AA Co in England. They saw no boundaries to their inhumanity. Working under the AA Co was so bad, that assigned convicts dreamt of working on a Government chain gang in Newcastle!



A convict gang working on the Nobbys breakwater  
Source: *Coal and the Community*.

Even the well-disposed business paper, 'The Commercial Journal', reported in 1840:

*"Great inconvenience and delay have of late been occasioned, by the Australian company not being able to supply coals in sufficient quantities for the numerous vessels now lying at Newcastle. The chief cause appears to arise from the feeble and worn out state of their assigned servants, occasioned by excessive labour and the small allowance of rations awarded them. These miserable creatures have every appearance of "Walking spectres" - such woe begone and wretched objects are scarcely to be met within the colony. An allowance of 3s per ton has been offered..."*

*Continued next page...*

### 'Newcastle and Rail – The Never-ending Story' Continued...

*these men to perform extra work; but their strength will scarcely carry them through their regular work, setting aside over time labour. They can only be compared with an over worked horse, who, despite all whipping, is unable to job one step farther. We have numerous instances of men belonging to the Company, committing offences for the mere purpose of getting into ironed gangs, in preference to remaining in their service. We consider that if these men were governed by persons disposed to serve the Company instead of themselves, things would go on much better."*

Convicts were flogged for the slightest misdemeanours and the floggers were often friends or acquaintances of the convict being assailed. Flogging was hard work which people in authority wished to avoid. By ordering a convict mate to flog a convict mate they believed that they could break any spirit of camaraderie generated by shared adversity. If the flogger went too lightly on their convict mate, they, could suffer a similar fate.

To add to the sorry scene, often those in authority were of the personality type attracted to places of secondary punishment like Newcastle. They gained depraved satisfaction in witnessing human suffering. As an act of defiance, convicts tried to avoid giving them the pleasure of showing pain.

A convict, called Mortlock, wrote:  
*"In Australia, silent composure under suffering is strictly prescribed by convict etiquette."*

As in the AA Co case, flogging had a downside in that it reduced the convict's capacity to work. It was not unknown, that when convicts claimed they were unable to undertake their assigned tasks because they had been flogged, they were flogged again for not working, leading to a vicious cycle of degradation and often death. Unfortunately, for a long time there was always another convict to take their place for free from the Government.

Amidst the misery being dealt out under the AA Co banner in gruesome Newcastle, financially it was all a nice little earner for the elite in distant England. The town was out of sight of the public in Britain where the Company wouldn't have been able to get away with its oppressive behaviour in the light of the rise of the humanitarian movement which emphasised the dignity of the individual in growing middle-class England. There was little of that in the AA Company's treatment of its convict workers in its Newcastle coal operation unthreatened by Government intervention or more benevolent competitors who were shut out owing to the Company's monopoly.

Still, the profits from coal mining kept flowing freely from the Colony back to upper-class England, especially during drought and depression in the rural sector in the 1840s when the Company's rural activities took a hit. The AA Co knew it was onto such a good thing that for decades it did everything in its power to preserve its coal monopoly by fair means or

foul and unbridled greed even saw it bid to secure a coal monopoly overall of NSW!

### But what has this got to do with railways in Newcastle?

Well, when the AA Co entered coal mining, it did so by investing in up-to-date technology from England to leverage the effort of its assigned convict labour and increase production. This was a sound business decision where it was replacing a shrinking pool of cheap labour with capital investment.

For the earliest method of loading coal on ships at Newcastle was by convicts wading out through shallow water with buckets full. Once the first wharf was built in 1805, dirt tracks were constructed to enable wheelbarrows to be used. Gradually men were replaced by oxen pulling cartloads of coal to the wharves and then convicts took over to wheel barrowloads into the ships' holds, however, they often damaged the coal in the process.

At times, larger ships could not get close into the shallows near the piers so coal had to be tipped into a lighter and from the lighter to the ship. Not only was this inefficient, the constant tramping and handling frequently reduced the coal to dust by the time it reached Sydney. After 1817, a gang of 'professionals' was brought to the town to improve the loading of the coal onto the ships but the whole process was incredibly labour intensive.

To give the Company its due, its new investment created growth within a stagnant Newcastle township.

An account by the reporter for the Sydney Gazette travelling to Newcastle in 1831 observed that:

*"Newcastle is a small, straggling town, many of its houses in a state of decay, and presenting a striking picture of a deserted village. The regularity of steam navigation, together with the coal establishment of the Australian Agricultural Company, which is now actively at work with its steam engines and rail roads, may however, revive its trade, and make it a seaport of some importance."*

From its first mine on 'The Hill' in Newcastle – the 'A' Pit - the AA Company went on to operate nine more pits in the inner-city and suburbs, including west to Hamilton and south to 'H' Pit, at Glebe Hill built on the free Crown land and mineral resources.



AA Co coal wagons lined up for haulage to the port of Newcastle. The people are attending a memorial service for men killed in a mining accident. Source: *Hidden Hamilton*.

Having gained a Government-gifted strategic foothold, the AA Co leveraged it to the maximum. At times, it took potential competitors to court with the encouragement of the Government to enforce not only its advantaged business position but critical geographic location between port, rail and coal sites in Newcastle. It would use this location to obstruct potential competitors' access to the port with railways when the monopoly agreement ran out. But more of that in the future.

Coal mining became the most profitable arm of the Company for the rest of the 19th century. Railway development within and outside its mines on the way to port in Newcastle was absolutely critical. In turn, it spurred Newcastle's growth in population and agricultural, manufacturing and service industries in its region.

### So where was the AA Co's railway?

The AA Company's first mine was located above the Dudley Coal Seam on the corner of the present Brown and Church Streets in Newcastle. The coal, as well as seepage water, was raised by means of a 20-horse power steam beam engine made in the local town's namesake, Newcastle upon-Tyne in England.

When the coal won by miners' picks underground reached the pit's mouth from only a little over 40 metres down, it was dumped into a large coal yard enclosed by a substantial brick wall. The storage had a holding capacity of up to 2,000 tons.

And here's the historic railway moment as a first in Australia - from the gates of this yard, an iron railway was constructed 300 metres to the end of a new wharf.

The first half was on an inclined plane built on a sloping earth bank. The last section of railway to the harbour waters was constructed on the level, while sitting on a wooden trestle frame. It was even fitted with a drawbridge to allow horse-drawn road traffic to pass through.

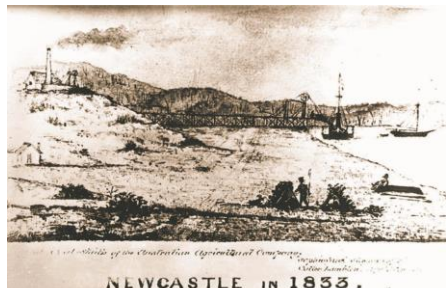
Yes only 300 metres - but it was a railway and there was a steam engine – admittedly not a steam locomotive, to drive it.

On this strip of railway, one-ton coal wagons were lowered down the inclined plane by a rope passing around a very large wheel, with the other end of the rope attached to several empty wagons which were drawn up for loading by the weight of the full one going down.

When a full descending wagon entered the level section of the framework, the rope was unhooked, and three wagons linked together and pushed to a short wharf by one man. The coal was then discharged into a waiting vessel's hold by a long chute. The coal was sent spewing down the chute by a man knocking out a bolt to open up the hinged flap floor of the coal wagon.

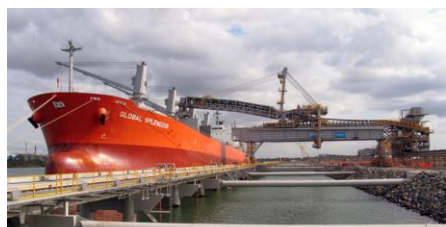
*Continued next page...*

**'Newcastle and Rail – The Never-ending Story'**  
Continued...



The Australian Agricultural Company's coal loader in 1833. It is feeding coal into a ship in the Hunter River using a railway from the Company's A Pit under today's Fort Scratchley. The scene was sketched by a clerk in the AA Co's accountant's office. Source: *Newcastle Herald*.

It certainly was an improvement on the Government's convict scheme of mining. While, the AA Company's annual output in 1836 was little more than 12,000 tons, by 1840 it was over 30,000 tons and in 1854 reached about 44,000 tons – but only a few trains' worth in 2018.



The 'Global Splendour' being loaded with coal at the Port of Newcastle. Source: *The Aurecon Group*.

All a tiny railway step, but it was the beginning of massive rail and coal development in Newcastle which now sees 160 million tonnes railed to the Port of Newcastle annually for shipment around the world.



Coal feeding by rail to a loader in the modern Hunter Valley supply chain. Source: *Australian Mining*.

*More in next month's edition.*

\*\*\*

**More Snaps from Club Activities**  
**Club 48<sup>th</sup> Birthday Meeting - 2<sup>nd</sup> August 2018**



(L-R) John, Alan, Bob, Kinga, Mal, Graham, Martin, Allan, & Cheryl.



(L-R) Pat, Mal, Graham, Martin, Allan, Cheryl, Jean, Ian & Claudia.



(L-R) Martin, Allan, Jean, Ian, Claudia & Augie.



(L-R) Ellen, Gerry, John, Alan, Bob, Kinga & Pat.

\*\*\*

**Workshop - 6<sup>th</sup> September 2018**  
Preparing Gem Trees and Minerals for the 2019 Exhibition.



(L-R) Cheryl, Betty, Jean & Ian.



Ian cutting out mineral labels.



(L-R) Cheryl, Betty, & Jean.

**Workshop - 25<sup>th</sup> September 2018**



(L-R) X, Wendy, Betty, Janet, & Cheryl.



(L-R) Wendy, Irene, Janet, Betty & Cheryl.



(L-R) Allan, Wendy, Irene, Janet, Ian & Cheryl.



*See more members' pictures on pages 17.*

\*\*\*

Contributed by Augie Gray...

Extract from BBC News, 23 November 2018 - <https://www.bbc.com/news/uk-england-stoke-staffordshire-46291230>

### The Staffordshire Hoard: Replicas of 'king's helmet' on show



The reconstructed helmets are based on hundreds of fragments found within the Staffordshire hoard. Image copyright: BIRMINGHAM MUSEUM.

**A helmet thought to have been worn by a king has been reconstructed nine years after fragments of the original were found within the Staffordshire hoard.**

“Of 4,000 pieces **dug up in a field in 2009**, up to a third were remnants of the rare Anglo-Saxon helmet, one of only a small number ever found in the UK.”, Birmingham Museums Trust said. The Staffordshire hoard is the largest treasure haul of its kind. The reconstructed helmets are going on show in Birmingham and Stoke-on-Trent. “Pieces discovered near Lichfield nine years ago are comparable to those from the Sutton Hoo helmet found in Suffolk in 1939.”, the trust said.

Experts studied the fragments, believed to be more than 1,300 years old, to build a picture of the original.



The two helmets join the permanent collections in Birmingham and Stoke-on-Trent. Image copyright: BIRMINGHAM MUSEUM.



Researchers spent four years studying the treasure in a project funded by Historic England. Image copyright: BIRMINGHAM MUSEUM.

The pieces go on show at Birmingham Museum and Art Gallery and The Potteries Museum and Art Gallery, in Stoke-on-Trent, from Friday, joining other items from the 7th Century collection on permanent display.

"After nearly 10 years, the Staffordshire hoard is still giving up its secrets.", Dr Ellen McAdam, from the Birmingham trust, said. She added, "Research has now shown us that the hoard contains fragments of a helmet; only

Anglo-Saxon kings wore helmets, and this is one of a very small number ever to be found."



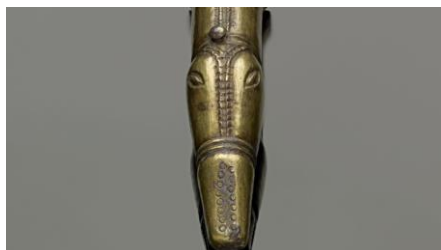
The reconstructed helmets will go on permanent display. Image copyright: BIRMINGHAM MUSEUM.



The Sutton Hoo helmet (pictured) was famously found in a large burial ship during excavation work in Suffolk in the 1930s. Image copyright: GETTY IMAGE/OLI SCARFF.

#### The Staffordshire hoard

- The Staffordshire hoard is made up of almost 4,000 fragments, belonging to an estimated 450-500 objects, mainly gold and silver.
- It is thought to have been buried between 650 and 700 AD and demonstrates the work of highly skilled and technically advanced smiths.
- Valued at an estimated £3.3m, the first items were discovered by metal detectorist Terry Herbert in July 2009, with other artefacts found later.
- The area was once part of the Mercia kingdom, which by the 8th Century had become the most powerful in the country.
- How and why it came to be buried in a unremarkable field remains a mystery.



The rare fragments of the original helmet are believed to be more than 1,300 years old. Image copyright: BIRMINGHAM MUSEUM.



The hoard was found in a field on the edge of the village of Hammerwich, near Lichfield, in 2009. Image copyright: BIRMINGHAM MUSEUM.

Significant parts of the original helmet have not been found and surviving pieces are too damaged and incomplete for experts to reassemble it. Researchers spent four years

studying the fragments. The team, including members of the School of Jewellery at Birmingham City University, scanned them by laser to ensure any replica pieces were as close to the surviving parts as possible.

Conservators believe some of the items in the Staffordshire hoard could have been produced in the same workshop as pieces found at the Sutton Hoo site.

**This location in Suffolk is believed to be the burial site of King Raedwald, who ruled East Anglia in the 7th Century.**

But researchers on the Staffordshire project said despite intensive work, they did not know who the helmet was made for.



Image copyright: BIRMINGHAM MUSEUM.



Image copyright: BIRMINGHAM MUSEUM.



\*\*\*



**More Snaps from Club Activities**  
**Work Shop followed by the 2018 Melbourne**  
**Cup Luncheon - 6<sup>th</sup> November 2018.**



(F-L-R) Wendy & Augie. (B-L-R) Blue, Cherryl, Doug & Russell.



(L-R) Ian, Rod, Blue, Cherryl & Doug.



(F-L-R) Russell & Doug. (B-L-R) Ken, Augie, Wendy & Ian.



(F-L-R) Doug, Cherryl & Blue. (B-L-R) Wendy & Ian.



(F-L-R) Betty & Cherryl. (B-L-R) Allan & Ken.



(F-L-R) Augie, Russell & Wendy. (B-L-R) Betty & Ken.



(L-R) Trevor, Doug, Raelene & Ian.



(F-L-R) Janet & Louise. (B-L-R) Augie & Irene.



(L-F-B) Louise, Augie, Janet & John. (R-F-B) Irene, Ken, Allan & Ian.



(L-F-B) Janet, Ian & Allan. (R-F-B) Louise, Irene, Augie, Ken, John, Doug & Chris.



Food is on the tables shown, and the money is on the meeting table.



(L-R) Ian, Chris, Janet & John.



(Clockwise 6-5) Irene, Betty, Raelene, Ken, Cherryl & Trevor.



Doug, Louise & Pat.



(L-R) Ken, Cherryl, Augie, Allan & Chris.



The race is underway, and the winnings are waiting on the table...

\*\*\*

Contributed by Doug Hughes...

**Philosophers of the Century**



**Betsy Salkind...**'Men are like linoleum floors. Lay 'em right and you can walk all over them for thirty years.'



**Jean Kerr...**'The only reason they say, 'Women and children first' is to test the strength of the lifeboats.'



**Prince Philip...**'When a man opens a car door for his wife, it's either a new car or a new wife.'



**Harrison Ford...**'Wood burns faster when you have to cut and chop it yourself.'



**Spike Milligan...**'The best cure for Sea Sickness, is to sit under a tree.'



**Jean Rostand...**'Kill one man and you're a murderer, kill a million and you're a conqueror.'



**Arnold Schwarzenegger...**'Having more money doesn't make you happier. I have 50 million dollars but I'm just as happy as when I had 48 million.'



**WH Auden...**'We are here on earth to do good unto others. What the others are here for, I have no idea.'



**Johnny Carson...**'If life were fair, Elvis would still be alive today and all the impersonators would be dead.'



**Steve Martin...**'Hollywood must be the only place on earth where you can be fired by a man wearing a Hawaiian shirt and a baseball cap.'



**Jimmy Durante...**'Home cooking. Where many a man thinks his wife is.'



**George Roberts...**'The first piece of luggage on the carousel never belongs to anyone.'



**Jonathan Winters...**'If God had intended us to fly, he would have made it easier to get to the airport.'



**Robert Benchley...**'I have kleptomania, but when it gets bad, I take something for it.'



**John Glenn...**'As I hurtled through space, one thought kept crossing my mind - every part of this rocket was supplied by the lowest bidder.'



**David Letterman...**'America is the only country where a significant proportion of the population believes that professional wrestling is real, but the moon landing was faked.'



**Howard Hughes...**'I'm not a paranoid, deranged millionaire. Dammit, I'm a billionaire.'



**Old Italian proverb...**'After the game, the King and the pawn go into the same box.'

\*\*\*

Contributed by Augie Gray...

Poster found in a Church in France... (translated):

"When you enter this church it may be possible that you hear "the call of God". However, it is unlikely that He will call you on your mobile. Thank you for turning off your phones. If you want to talk to God, enter, choose a quiet place and talk to Him. If you want to see Him, send Him a text while driving."



Contributed by Augie Gray...

**Confucius Did Not Say:**

- Man, who wants pretty nurse must be patient.
- Passionate kiss, like spider web, leads to undoing of fly.
- Lady who goes camping with man must beware of evil intent.
- Squirrel who runs up woman's leg will not find nuts.
- Man, who leaps off cliff jumps to conclusion.
- Man, who runs in front of car gets tired, but man who runs behind car gets exhausted.
- Man, who eats many prunes gets good run for money.
- War does not determine who is right; it determines who is left.
- Man, who fights with wife all day get no piece at night.
- It takes many nails to build a crib, but only one screw to fill it.
- Man, who drives like hell is bound to get there.
- Man, who stands on toilet is high on pot.
- Wise man does not keep sledge hammer and slow computer in same room.
- Man, who lives in glass house should change clothes in basement.

\*\*\*

**I ordered some German food over the Internet. The sauerkraut has arrived, but the wurst is yet to come!**

\*\*\*

**"I don't have an attitude, I simply have a personality you can't handle!"**

\*\*\*

Contributed by Doug Walker...

**THE DAY HAS ARRIVED!**

*The day that Albert Einstein feared most has arrived!*



Planning their honeymoon.



A day at the beach.



Having dinner out with your friends.



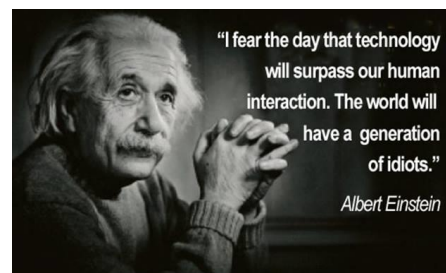
Out on an intimate date.



Having a conversation with your bestie.



A visit to the museum.



**It's here!**

\*\*\*

Contributed by Doug Walker...

A **paraprosookian** (/pærəprɒs' dʊkiən/) is a figure of speech in which the latter part of a sentence, phrase, or larger discourse is surprising or unexpected in a way that causes the reader or listener to reframe or reinterpret the first part.

- If I had a dollar for every girl that found me unattractive, they'd eventually find me attractive.
- Artificial intelligence is no match for natural stupidity.
- I'm great at multi-tasking— I can waste time, be unproductive and procrastinate all at once.
- If you can smile when things go wrong, you have someone in mind to blame.
- Take my advice — I'm not using it.
- Behind every great man is a woman rolling her eyes.
- Ever stop to think and forget to start again?
- Women spend more time wondering what men are thinking than men spend thinking.
- Is it wrong that only one company makes the game Monopoly?
- I was going to wear my camouflage shirt today, but I couldn't find it.
- Sometimes I wake up grumpy; other times, I let her sleep.
- If tomatoes are technically a fruit, is ketchup a smoothie?

\*\*\*

Members' Noticeboard

**Sat 30<sup>th</sup> - Sun 31<sup>st</sup> March 2019  
Canberra Rock Swap – ACT**

8:30am to 5pm (Sat) 8:30am to 4:00pm (Sun)  
Wagtail Way, EPIC - Exhibition Park in Canberra,  
ACT.

Features: Fossickers & dealers. Crystals, minerals,  
rough & cut gemstones, opals, fossils, lapidary  
supplies, jewellery. Sieve for sapphires. Food  
available - No entry cost

For further information in the first instance on any  
of these events please contact the Club's Show  
Convenor, **Norm Menadue** on (02) 6258 6631

\*\*\*

**Mineral Boxes and Flats Price List**

(Prices may be subject to increase, due to the price of cardboard)

AA	3.5 x 3.3cm.....	per 100	\$12.00
	Per 10	\$1.50	
A	4cm x 4cm.....	per 100	\$13.00
	Per 10	\$1.50	
B	5cm x 5.2cm.....	per 100	\$15.00
	Per 10	\$2.00	
C	6.2cm x 7.5cm.....	per 100	\$18.00
	Per 10	\$2.50	
D	7cm x 7cm.....	per 100	\$19.00
	Per 10	\$2.50	
E	7cm x 9.5cm.....	per 100	\$20.00
	Per 10	\$2.50	
F	8.5cm x 9.5cm.....	per 100	\$22.00
	Per 10	\$3.00	
G	9.5cm x 9.5cm.....	per 100	\$23.00
	Per 10	\$3.50	
H	13cm x 9.5cm.....	per 100	\$25.00
	Per 10	\$4.00	
I	13cm x 12.5cm.....	per 100	\$30.00
	Per 10	\$4.50	
Flat	395 x 265 x 50mm.....(lid & base)		\$2.50
Flat	398 x 290 x 98mm.....(lid & base)		\$4.00

**Greg Vort-Ronald 0413796279**  
**Email luv2paint@iprimus.com.au**

\*\*\*

**Fri 3rd - Sun 5th, May 2019, Murraylands Gem  
and Mineral Club Rockarama "Crystal and  
Craft Fair", Collier Park, Palmer, SA.**


Features: Exhibits of gems, minerals, fossils,  
jewellery, lapidary machinery and more...most being  
for sale. Meals, snacks, and drinks available. Public  
Entry to all the weekend events is FREE.

The Rockarama also includes the 2019 South  
Australian Metal Detecting Championships which will  
be held at Collier Park, Palmer, South Australia, on  
Sunday May 5th, 2019 (Session 1 - Morning  
competition 10.30am - 11.30am, Session 2 -  
Afternoon competition 1.00pm - 2.00pm, and the  
competition prize presentation is at 2.45pm.).

Click/tap on link...[MGMC Website](#)

MGMC President (Kym): 0427 054 336


\*\*\*



Tea Tree Gully Gem and  
Mineral Club Inc.




**2019**




**Biennial Exhibition**



Tea Tree Gully Primary School  
Memorial Drive, Tea Tree Gully

Saturday 20<sup>th</sup> July - 9am to 5pm  
Sunday 21<sup>st</sup> July - 10am to 4pm

**Demonstrations**  
Bone Carving  
Gemstone Identification  
Light Meals and  
Refreshments  
Raffle

**Sales**  
Hand Crafted Jewellery  
Mineral Specimens  
Fossils  
Gemstone Rough  
Cut and Polished Gems  
Tools and Equipment  
Books

**Admission Prices**  
All entry - \$5.00  
Children under 12 with an Adult are Free

For more information contact:  
Ian Everard 0417 859 443

PLEASE NOTE: To preserve the floor, NO STILETTOS or STUDED FOOTWEAR.

2018

Last Club meeting finishes on 6<sup>th</sup> December

Last class finishes on 21st December



\*

\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*



**Merry Christmas &  
Happy New Year**

2019

Tuesday Faceting class resumes on 8<sup>th</sup> January

Wednesday Silver class resumes on 9<sup>th</sup> January

Thursday Lapidary class resumes on 10<sup>th</sup> January

Club meetings resume on Thursday 7<sup>th</sup> February

Friday Silver class resumes on 8<sup>th</sup> February

\*\*\*

Useful Internet Links

- 2018 Australian Gem & Mineral Calendar: [Click here...](#)
- Adelaide Gem and Mineral Club: [Click here...](#)
- AFLACA-GMCASA: [Click here...](#)
- Australian Federation of Lapidary and Allied Crafts Association (AFLACA): [Click here...](#)
- Australian Lapidary Club Directory: [Click here...](#)
- Australian Lapidary Forum: [Click here...](#)
- Broken Hill Mineral Club: [Click here...](#)
- Enfield Gem and Mineral Club Inc: [Click here...](#)
- Flinders Gem, Geology, and Mineral Club Inc: [Click here...](#)
- Gem and Mineral Clubs Association of South Australia: [Click here...](#)
- Lapidary World: [Click here...](#)
- Metal Detectors - Garrett Australia: [Click here...](#)
- Metal Detectors - Miners Den Adelaide: [Click here...](#)
- Metal Detectors - Adelaide Agent for Garrett Australia: [Click here...](#)
- Mineralogical Society of SA Inc: [Click here...](#)
- Murraylands Gem and Mineral Club Inc: [Click here...](#)
- NQ Explorers: [Click here...](#)
- Prospecting Australia: [Click here...](#)
- Shell-lap Lapidary Supplies: [Click here...](#)
- Southern Rockhounds: [Click here...](#)
- Tea Tree Gully Gem and Mineral Club: [Click here...](#)
- The Australian Mineral Collector: [Click here...](#)