



Tea Tree Gully Gem & Mineral Club Inc. (TTGGMC)
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**February
Edition
2020**

"Rockzette" Tea Tree Gully Gem & Mineral Club News

President's Report

Hi All,
Well Xmas is over, so we're back into it again. The usual diehards turn up even when the temperature's in the 40s. Good to see such dedication. 'til next month...Cheers,
Ian.

Diary Dates / Notices

Happy Birthday

Members celebrating February birthdays:

09th – Bev Freeman. 10th – Ellen Dillon.
15th – Ken Jewell.

2020

Happy New Year Tea Tree Gully Gem and Mineral Club Members

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Augie's February Birthstone selections...



General Interest

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Club Activities / Fees

Meetings

Club meetings are held on the 1st Thursday of each month except February. Committee meetings start at 7 pm. General meetings - arrive at 7.30 pm for 8 pm start.

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.

Tuesday Faceting/Cabbing

Tuesdays - 10 am to 2 pm.
All are welcome. Supervised by Doug Walker (7120 2221).

Wednesday Silversmithing

Wednesdays - 7 pm to 9 pm.
All are welcome. Supervised by Augie Gray (8265 4815 / 0433 571 887).

Thursday Cabbing

Thursdays - 10 am to 2 pm.
All are welcome. Supervised by Augie Gray (8265 4815 / 0433 571 887).

Friday Silversmithing

Fridays - 9 am to 12 noon.
All are welcome. Supervised by John Hill (8251 1118).

Faceting/Cabbing/Silversmithing Fees:

A standard fee of \$3.00 per session applies – to be paid to the session supervisor.

In the interest of providing a safe working environment, it is necessary to ensure everyone using the workshops follow the rules set out in *Policy No. 1 - 20/11/2006*.

It is necessary that *Health and Safety* regulations are adhered to always.

Everyone using the workshop must ensure:

- 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.
- that all workstations 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 or dried.

NOTE: 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.

Club Subscriptions:

\$25.00 Family	\$20.00 Family Pensioner
\$15.00 Single	\$12.50 Single Pensioner
\$10.00 Joining Fee	

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 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.

Augie's February 2020 Jasper Selections – Polychrome Jasper.

Polychrome Jasper, also known as Royal Savannah Jasper and Desert Jasper, is a very colourful brecciated Chalcedony. It was discovered on the NW coast of Madagascar in 2008, during a search for further deposits of Ocean Jasper.

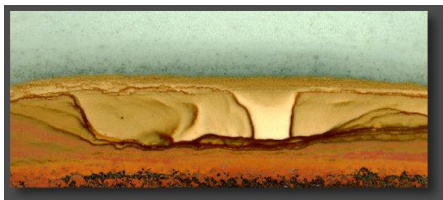
It is still one of the rarest Jaspers in the world.



Polychrome 01.



Polychrome 02.



Polychrome 03.



Polychrome 04.



Polychrome 05.



Polychrome 06.



Polychrome 07.



Polychrome 08.



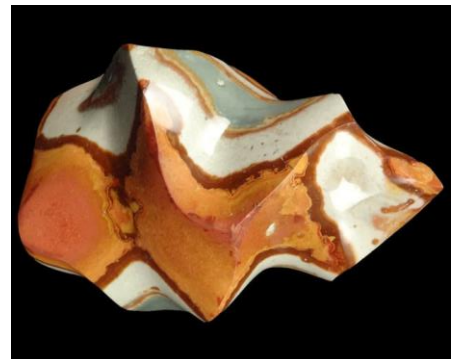
Polychrome 09.



Polychrome 10.



Polychrome 11.



Polychrome 12.

Augie's February 2020 Jasper Selections – Continued...



Polychrome 13.



Polychrome 14.



Polychrome 15.



Polychrome 16.



Polychrome 17.



Polychrome 18.



Polychrome 19.



Polychrome 20.



Polychrome 21.



Polychrome 22.



Polychrome 23.



Polychrome 24.

Augie's February 2020 Birthstone Selections - Amethyst.

Amethyst – February birthstone



Quartz var. Amethyst, Veracruz, MEXICO.

Amethyst is one of the 4 coloured varieties of Quartz, the others being Citrine, Rose Quartz and Smoky Quartz. Amethyst is historically the most valuable.

Being a Quartz, Amethyst is a Silicone Dioxide (SiO₂).

Crystal System: Hexagonal

Crystal Class: Trapezohedral

Crystal Habit: Typically, pyramidal, massive, drusy, fine-grained to microcrystalline

Twinning: Dauphine Law, Brazil Law and Japan Law

Cleavage: Indistinct

Fracture: Conchoidal

Hardness: 7

Specific Gravity: 2.65 (2.58 – 2.63 in impure varieties)

Refractive Index: 1.54

Optical: Uniaxial

Amethyst ranges in colour from a very light lilac, known in the trade as “Rose-de-France” through to very dark, almost black, purple. Siberian Amethyst, which is rarely seen nowadays, has a reddish tinge to it. The richest deep purple comes from Uruguay.

Ametrine is a variety of Quartz which has naturally occurring alternating bands of Amethyst and Citrine. It comes almost exclusively from southern Bolivia.

Localities:

Tall, prismatic, well-shaped crystals are restricted to several Mexican localities: Piedras Parado and Las Vigas de Ramirez, both in Veracruz; and Amatitlan, in Guerro. They occur in elongated crystals that are rarely faceted, since collectors pay well for these rarities. Another excellent Mexican locality is Guanajuato, where plates of stubby crystals are found.

Enormous quantities of Amethyst come from Minas Gerais, Brazil, which contains the famous Rio Grande do Sul, where huge crystal-lined Amethyst geodes are found, especially in Ametista do Sul.

Another South American country, Uruguay, produces deeply coloured crystals in large geodes and pipes in Artigas, near the Brazilian border. Another good South American locality, which is especially noted for Ametrine, is the Anahi Mine, Santa Cruz, Bolivia.

Large amounts of Amethyst are found both in Namibia and South Africa - these are often labeled in the jewellery industry as "African Amethyst". In Namibia, an interesting occurrence is the Goboboseb Mountains, near Brandberg, in the Erongo Mountains, where crystals are zoned in lighter to darker colours. In South Africa, extensive deposits are in Boekenhouthoek (Magaliesberg), Mkobola district, where the Amethyst occurs with a spiky overgrowth of small crystals (popularly called "Cactus" or "Spirit" Quartz). Very dark and clear Amethyst was once found in Russia in the Ural Mountains and Siberia; and a drusy, lilac-coloured Amethyst in globular associations has recently come from Nyiri, in north-eastern Hungary.

There are two notable Canadian occurrences. One is Thunder Bay, Ontario, where specimens contain an internal coating of red Haematite. The other locality is the area of Digby, Nova Scotia, where naturally rounded, waterworn Amethyst pebbles are found on the beaches along the Bay of Fundy.

Brazil, Mexico and Uruguay produce hollow, Amethyst lined geodes and “cathedrals” of Amethyst, some of which are up to 4 metres in height.



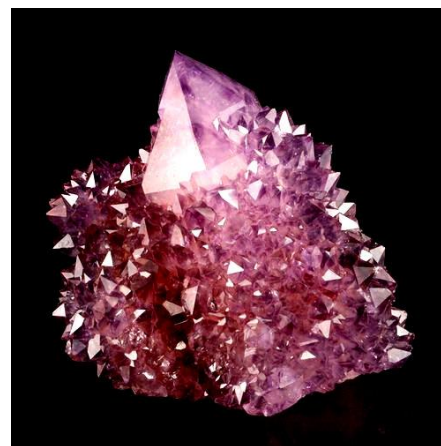
Ametrine 1.



Ametrine 2.



Brazilian.



Cactus.



Cathedral..

Augie's February 2020 Birthstone Selections - Amethyst. Continued...



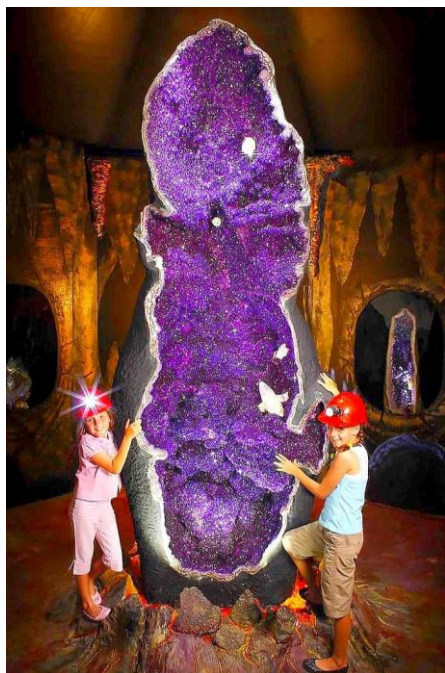
Chevron Slab.



Chevron.



Display.



Empress of Uruguay.



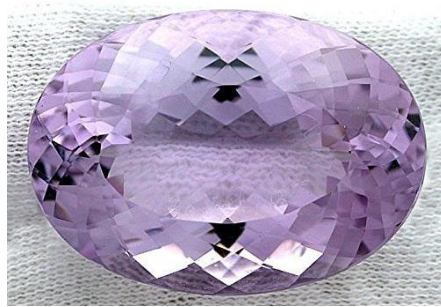
Geode 1.



Geode 2.



Geode 3.



Rose-de-France.



Siberian.



Single Crystal.



Stalactite slice.



Uruguyan.



Veracruz 2.

**Ian's Quartz Collection Selections
for February 2020**



0915 Quartz over Calcite, Lonavala, INDIA.



1882 Apophyllite and Stilbite on Quartz, Poona, INDIA.



1037 Quartz after Calcite, INDIA.



1088 Quartz, Maharashtra, INDIA.

Ian's Quartz Collection Selections for February 2020 – Continued...



0834 Quartz, Lonavala, Pune, INDIA.



0839 Stilbite and Quartz, Jalgaon, INDIA.



1402 Stilbite on Quartz, Jalgaon, INDIA.



0835 Quartz, Nasik, INDIA.



0964 Apophyllite on Quartz, Poona, INDIA.



1648 Quartz, Poona, INDIA.



0837 Quartz, Nasik, INDIA.



2293 Apophyllite on Quartz, Jalgaon, INDIA.



2683 Okenite on Quartz, Poona, INDIA.



0838 Apophyllite on Quartz, Nasik, INDIA.



1038 Apophyllite on Quartz, Poona, INDIA.



2054 Calcite on Quartz, Poona, INDIA.

Contributed by Mel Jones...

‘Newcastle and Rail – The Never-ending Story’ by Garry Reynolds Part 16 of 24...



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*.



The BHP Steelworks overlooking Newcastle Harbour – an industrial icon to the end. Source: *Quentin Jones*.

Corporate giants, BHP and Pasminco, were major users of private and government railway networks in Newcastle as they grew the Steelworks and the Cockle Creek Smelter into industry and rail hubs.

However, there were also middle range railway-related corporations that made a significant contribution to the growth of Newcastle as the nation’s industrial hub in the 19th and 20th centuries. As well there was an audacious coal and railway entrepreneur who came on the scene in the 21st century.

One of the railway business partnerships even gained its capital through a seemingly ‘old school’ Australian way - on a series of betting plunges at the races!



The fall of an industry giant – down comes BHP’s Newcastle Steelworks. Source: *Mail Times*.

The Bradken Rail Story

Leslie Bradford and Jim Kendall were best mates who took parts of their names to form an engineering company later called ‘Bradken’ which made heavy railway equipment.

Early in Les’s career, he became a metallurgist with BHP at Broken Hill. Then in 1915, he was transferred to the Company’s brand new steelworks at Newcastle.

On the other hand, Jim arrived in Sydney from Canada in 1909 as a brash young salesman and topclass ice hockey player. During WW1, he travelled back to Canada but returned during the War when he was appointed BHP’s Chief Mechanical Engineer. He was also selected for

the NSW Ice Hockey Team and regularly commuted by train between Newcastle and Sydney to play matches, often starting at 10.15 in the evening, before returning to work by travelling on the ‘Paper Train’ in the early hours of the morning.



Best mates who met at BHP Newcastle and established a rail equipment company funded on horse race wins. Source: *Bradken*.

After the War, Jim and Les used to go for a day out to the Newcastle Races with a group of friends. Early on, they got lucky when they punted on a horse called ‘Jack Findlay’. It had five straight wins between 1919 and 1920. On each of the horse’s races, the boys rolled-over their bets. By January 1920, Jim and Les had won a small fortune.

The duo pledged their 15,000 pounds in total winnings to start a steel foundry business. By April, 1920, they took another punt by leaving BHP and using their winnings to establish the ‘Alloy Steel Syndicate’ and build a foundry at Alexandria in Sydney.

Four years later, a new company, ‘Bradford Kendall Ltd’, was incorporated in 1922. It started to manufacture railway couplers and undercarriages under licence as part of the foundry business.

Despite Bradford Kendall’s success, or perhaps because of it, Les Bradford was headhunted to become General Manager of BHP in Melbourne under Essington Lewis in 1935. Lewis was then Chief Executive Officer, who in 1938 went on to head up Australia’s Munitions production.

At the same time, Les remained an active director of Bradford Kendall Pty Ltd, by then a major foundry. In 1940, he set up Bradford Insulation Ltd to manufacture rock-wool from the Steelworks’ slag. He was also a director of Australian Iron and Steel Ltd, Lysaght Bros & Co. Ltd, and a range of other leading companies in a series of cross-directorships. Despite these high status leadership positions, Les was gentle, sensitive and withdrawn.

Like many other companies which grew up in the 1920’s, Jim and Les’s railway equipment

venture struggled through the Great Depression and the early thirties. However, it boomed during World War 2 when it switched to producing military supplies – a move that proved very lucrative.

Initially the Company produced bombs for the Airforce and gun parts and ship hulls for the Navy. When approached by the Commonwealth Government, Bradford Kendall Ltd produced armour casting for an Australian-built tank program. Its major contribution to the War Effort was the development of the world’s first one-piece cast tank hull in 1940.

After the War, Australia’s rundown railway systems needed massive rehabilitation, which the Company was ideally-placed to undertake. In 1948, Bradford Kendall took advantage of this boom and listed on the Sydney Stock Exchange.

In the 1950’s and 1960s, it generated significant profits from the introduction of diesel-electric locomotives across Australia’s railway systems. This was complemented by providing equipment for higher speed and larger capacity freight trains that were being introduced to compete with road haulage.



The ‘South Coast Daylight Express’ racing through Sutherland riding on Bradken cast bogies under its Tullouch and Budd rail cars. Source: *David Patterson*.

After undergoing several takeovers, the Company’s name was abbreviated to ‘Bradken’. It moved into the mining and industrial equipment area while retaining its long established position in the rail industry with castings.

Bradken went on to become Australia’s largest combined foundry and heavy engineering group and one of the leading ferrous-casting companies in the world. Yes all this from a couple of bets on a horse at Newcastle racecourse!

In 2017, Bradken became a wholly-owned subsidiary of Hitachi. However, its corporate office remains at ‘Steel River’ in Newcastle, from where it coordinates 24 plants around the world with a 3,500-strong workforce.

The Goninan and Comsteel Rail Story



The Goninan brothers' engineering works in 1906 at Wickham. Source: University of Newcastle.

Another leading Newcastle railway firm got its global start in a partnership between two brothers. In 1899, Alfred and Ralph Goninan, originally from Cornwall, established an engineering and manufacturing company with 12 staff. It was located in the inner Newcastle suburb of Wickham to service the Newcastle coal mining industry. In particular, the brothers saw opportunities in building coal skips and rail wagons. From this small start, the Firm went on to eventually become a large railway services and equipment provider in the Asia Pacific.

However, the Goninans experienced difficulties during World War I in supplying its customers. In 1917, it expanded further into the railway business by helping to establish the 'Commonwealth Steel Company' (Comsteel) in partnership with three Sydney rail foundries.

Comsteel, located at Waratah adjacent to BHP, was established as a railway wheel and axle manufacturer because these components could no longer be imported from Belgium owing to its invasion by the Germans. However, by the time the Company was up and running, the War was over.



A Goninan-built 43-class diesel-electric locomotive at Broadmeadow Roundhouse. Source: David Patterson.

During the War, Alfred Goninan visited the United States to buy machinery to increase his company's participation in the railway manufacturing industry. This was the first of seven overseas trips he made to obtain equipment, research new ideas and secure licences for manufacturing advanced products.

After the War, in 1919, 'A. Goninan & Co' moved from Wickham to a larger freehold site near the Broadmeadow rail hub and built a flourishing business in general engineering making pitheads, boilers, and wagons. Locomotives were brought to the Broadmeadow site for shunting, and Goninan's proximity to the rail junction was a great advantage. This site was also connected to the Hartley Vale Private Railway, constructed in 1867 by J&A Brown, as well as being close to the Waratah and Old Lambton Colliery Railways.

Through the 1920s, the Firm went on to specialise in large jobs such as supplying bridges for the NSW Government Railways and heavy equipment for the BHP Steelworks.



4306 heritage diesel locomotive at Thirlmere in 2006. Goninan built six. Source: David Patterson.

However, the Goninan Company suffered severely in the Great Depression which placed the brotherly bond under enormous pressure. In 1933, Alfred was unable to service a large personal overdraft and was eased out of the company he had helped establish. While his going went with a small ex gratia pension, it was not enough to avoid lifelong recriminations with his founding brother, Ralph.

Under Ralph Goninan as managing director, the Company reached a peak in the 1940s during WW2. It had become one of the largest corporates in general engineering in Australia, employing over 700 people and with 3 years of orders in hand. Its workers did their bit during the War by forming the 'Britain Committee'. Through it, part of their wages was deducted each week to buy food for families in the UK. Ralph kept the railway legacy and the family name going when he retired in 1946 and was succeeded by his eldest son, also named Ralph.

In the early 1950s, the Goninan Company began the manufacture of diesel-electric locomotives in a partnership with the General Electric Company (USA) by using its designs, a field in which Goninan specialized over the next 25 years. This collaboration delivered over 500 locomotives to the Australian market.

Meanwhile, Goninan's early partnership with Comsteel saw the latter only just survive the Great Depression of the 1930s. It had to downscale to part-time operations to retain most of its workforce until they could be re-employed full-time. The revival occurred as Comsteel reached peak capacity during WW2 when it was an important supplier of munitions and other military supplies, including two million steel helmets. In celebrating its centenary in 2018, Comsteel remained the only Australian manufacturer of rail wheels and axles.

Meanwhile, throughout Goninan's history the ownership of the Company evolved via a series of mergers and acquisitions. In 1964, it was purchased by long-established shipping company, Howard Smith, which had serviced Newcastle for many years. In 1967, Goninan set a new benchmark for coal loading when it designed and built the Carrington Basin Coal Loader for the Maritime Services Board.

Then, in 1999, 'A. Goninan & Co' was sold to the 'United Group Limited (UGL)'. More than 200 people work at UGL's Broadmeadow facility, which has built generations of NSW passenger trains, including the Tangara and the Hunter Railcars.



Sydney Trains' Tangara cars. Goninan built 455. Source: Wikimedia.



Hunter railcars pass a heavy coal train heading for Newcastle. Goninan built 14 cars. Source: Hiveminer.



Sydney Trains' Oscar cars' on the Illawarra Line. Goninan built 196. Source: NSWtrains.



A pair of CFCLA EL locomotives at Port Waratah not far from where they were built at Gonian Broadmeadow. Source: Hive Miner.



Another EL Locomotive geared to reach 140kph. Goninan built 14. Source: Wikipedia.



Still going strong – a Goninan-built CFCLA locomotive on the Main Southern Line in 2018. Source: Rod Kelly.

All up, UGL employed about 7,000 people including subcontractors across Australia, New Zealand and South East Asia.



Cardiff Railway Stations near the turn of the 20th century. Source: Flickr.

Although the Broadmeadow Rail Centre is only a part of the UGL business, it and the Cardiff Rail Yards operated by rival, Downer EDI, have traditionally been two of the most important railway-related manufacturing sites in NSW.



A Sydney Trains' Millennium set built at EDI Downer, Cardiff. Source: Wikipedia.

Sydney's Waratah suburban trains were partly built at Cardiff and the NSW Government gave the contract for the next fleet of inter-city trains, including services to Newcastle, to UGL. However, the construction is not being undertaken at Broadmeadow but in South Korea, with maintenance to be undertaken in a new facility at Kangy Angy on the Central Coast.

But the corporate merry-go-round hasn't ended there. UGL has been taken over by CIMIC which is controlled by a German company, Hochtief, which is in turn owned by a Spanish group, ACS – that's globalisation in the rail industry.



NR locomotives hauling a long freight train. Goninan built 120 NRs for National Rail. Source: Auscision Models.

Walsh Island State Dockyard – a surprise railway manufacturer

Newcastle's Walsh Island State Dockyard and Engineering Works was established by the NSW Government in 1913, as a replacement for Sydney's Cockatoo Island Dockyard, that

was taken over by the Federal Government in the same year. The funds from the sale were used to establish Walsh Island as part of the State Government's decentralisation push.

It was an exciting time in Newcastle as the NSW Government had already encouraged the construction of the BHP Steelworks which was well under way. This was part of the Government's enhanced industrialisation and political strategy behind rising tariff walls. The NSW Labor Government was keen to create regional urban jobs for an expanding manufacturing working class – its base voters.

There were strong links to the Steelworks construction, as it was strategically planned by the Government that the private sector's dredging of the Hunter River for spoil for the BHP site would create deepened channels for Walsh Island, directly opposite, to become the centre of the State's shipbuilding industry.

Originally, Walsh Island was a long mud and sand spit at the junction of the North and South arms of the Hunter River - one of seven islands which were gradually reclaimed and now form the Eastern end of Kooragang Island.



The beginnings of Walsh Island with the dredge 'Castor'. Source: Newcastle Herald.

Dredging commenced as far back as 1897. As had happened at The Dyke and other Hunter River reclaimed sites, a rock retaining wall was constructed from sailing ships' ballast and silt was pumped in behind it from the River to raise the Island's ground level several metres above the high-water mark. By 1912, continuous dredging and pumping by the NSW Public Works Department had created 16 hectares of land to build on. However, a planned railway bridge from Walsh Island to the mainland never eventuated.



Steam dredges excavating the Hunter River channels between the Steelworks and the Dockyard in the foreground. Source: Newcastle Herald.

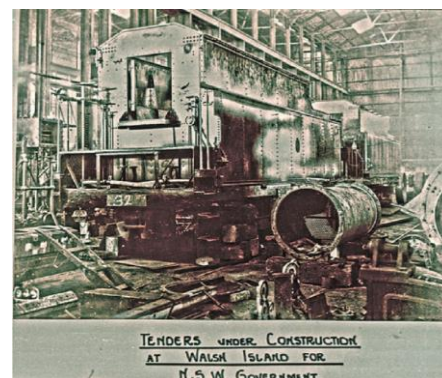
Once the land had been raised, few people could have estimated the spectacular growth of the Dockyard and Steelworks, for before WW1 it was expected they would employ no more than 1,000 men each. But the outbreak of the War saw resources being channelled to both

Newcastle and its industrial sites for the War Effort. The Dockyard entered into heavy shipbuilding, munitions production with shell casings and machine guns, a radio-controlled torpedo for coastal defence, aircraft engines, and airframe parts and components. It soon became Newcastle's second largest employer after the Steelworks. By the end of the War, they employed around 7,300 workers between them.

The War years were the greatest single period of job creation in Newcastle's history to that point. However, as the War progressed a lot longer than anticipated, the Dockyard's development was limited by shortages of materials, labour and money. At one stage it almost closed. However, by the early 1920's, Walsh Island had become the centre of Newcastle's shipbuilding and engineering industry.

In the initial Post-War period, there was an industrial decline in Australia as imports resumed flooding in. BHP adapted to the reduction of orders and the increased competition from overseas producers by becoming more innovative and introducing efficiencies generated by its dynamic leader, Essington Lewis.

On the other hand, the Walsh Island State Dockyard was initially more hidebound as a public sector enterprise. It also lacked full political support from a Conservative Government which had taken power in NSW and was always looking at opportunities to sell the Dockyard off to private enterprise.



One of the loco tender building projects that kept the Walsh Island State Dockyard going. Source: Flickr.

Still, 47 vessels were constructed at the Dockyard, including a 15,000-ton floating dock. More surprisingly, the NSW Government looked to the management to diversify. The State Dockyard was used to build railway bridges and to assemble electric carriages for the new Sydney suburban electric railway as well as trams for its growing urban network. The Dockyard also built four 36-seater motor coaches, a prototype toast rack tram, heavy steam road tractors, steel colliery skips along with boilers, deck fittings, propellers, fish bolts, dog spikes and cast-iron pipes.

The first 50 all-steel electric carriages for the new Sydney network were built by the Leeds Forge Company in the UK and sent out to Sydney in a 'knocked-down' condition. Here, 10 were assembled at the Eveleigh Railway

Workshops and 40 at Clyde Engineering. But in 1926-1927, another 50 were built at Walsh Island to meet the urgent demands of the rapidly expanding system of railway electrification. So successful was the exercise, that a further 50 were built in 1928 at the Dockyard and eventually by 1929, 248 had been built or rebuilt from older carriages.



TRAMCAR UNDER CONSTRUCTION.
AT WALSH ISLAND.
Source: Flickr river.



A completed Sydney electric railway carriage on a barge being transferred from assembly at Walsh Island State Dockyard. Source: Flickr.

Interestingly, with the lack of a bridge connection from Walsh Island to the mainland, the newly-built electric cars had to be transferred individually lashed down on rails on a purpose-built barge propelled by the steam-powered tug S.S. Minerva for eventual steam loco-haulage to Sydney.



A Walsh Island builder's plate of 1925. Source: Antiques Reporter.

To further diversify, Walsh Island Dockyard built steel bridges. Even today, rusted Walsh Island builder's plates can be seen mounted to disused steel structures at remote locations ranging from the Upper Hunter to Katherine in the Northern Territory.

By 1929, as finances tightened with the onset of the Great Depression, Government orders dried up and the Dockyard entered a downward spiral of mounting unsustainable losses. Extra costs and delays involved in transporting men

and materials to and from the Island didn't help. Damage done to submarine electric power cables laid across a busy waterway was also a problem.

Still, the Dockyard built American-designed omnibuses in 1930, claimed to be the first all-steel buses built in Australia.

Despite the efforts to diversify and feed the Dockyard a variety of Government work, it was eventually abandoned in 1933 amid the depths of the Great Depression. Components were dismantled and relocated to the new State Dockyard at Dyke End, Carrington. It was envisioned that the Carrington Dockyard would undertake only ship repair, not construction.

However, the outbreak of WW2 in 1939 created a massive new stimulus. By 1941, the last of the big Walsh Island buildings had been demolished or recycled and ferried downriver to be re-erected at the Carrington Dockyard.

In these desperate times, the State Dockyard was re-established as a ship builder in 1942 with the floating dock moved from Walsh Island. The dockyard launched its first vessel in July 1943. By the end of World War II, it had launched 2 ships for the Royal Australian Navy and 22 vessels for the United States and had repaired 600 ships. After the War, the Dockyard at Carrington continued to build and repair ships although it was always in survival mode.

With the cessation of large-scale shipbuilding, in the 1970s the Dockyard diversified into other engineering disciplines. Salvation appeared to come in 1978 when the State Government lashed out and bought a new floating dock manufactured in Japan. In 1986 a team of apprentices from the Hunter Valley Training Company completed a three-year overhaul of classic steam locomotive, 3801, at the Dockyard. However, the Dockyard continued to haemorrhage funds and was closed in 1987.



Plate 17: Aerial view of State Dockyard September 1945 The State Dockyard Newcastle NSW, 1945

'The Dyke' wharfage is on the right side of the buildings and 'The Basin' wharfage is on the left side.



Shipbuilding at Carrington. Source: Newcastle Herald.

Nathan Tinkler and the Hunter rail industry – the downfall of 'Young King Coal'

An interesting entrepreneur who entered the Hunter coal and rail industry in the early 21st century was Nathan Tinkler.



Cover of the book 'Boganaire: the Rise and Fall of Nathan Tinkler'. Source: BRW.

In 2018, business profiling company, 'Bloomberg', said the Tinkler Group Pty engages in owning and developing coal; developing coal terminals; providing logistical support; administering and developing sports; operating football clubs; and managing philanthropic activities of the Tinkler Family. The company was founded in 2003 and headquartered in Chapel Hill, Brisbane.



A young Nathan Tinkler on the way up the slippery corporate ladder. Source: Businessinsider.

A former coal mine apprentice electrician, Nathan Tinkler went from living with his parents to becoming Australia's youngest ever billionaire – then ending up bankrupt in 2016 after a rollercoaster ride.

In 2011, Tinkler's suite of companies came forward with a proposal to create a massive new coal loader on the site of the former Newcastle BHP Steelworks which closed in 1999. To gain community support, Tinkler promoted a strong environmental focus in the proposal supported by letterboxing 14,000 residents.



A dusty Port Waratah. Source: Hiveminer.



Nathan Tinkler's \$2.5Bn coal loader and new rail line proposal for the site of the former BHP Steelworks. Source: BRW.

One of Tinkler's companies, 'Hunter Rail', proposed a new rail link around the industrial foreshore - reportedly removing around 90% of coal trains from residential areas. If the proposed line got up, it would see the removal of the old railway line through residential Mayfield to create a new 'green belt'. It was anticipated that the proposed new rail corridor would have serviced other port-related industries, removing many heavy trucks from industrial areas.

According to another of Tinkler's companies, 'Hunter Ports', economic analysts believed the proposal would create around 800 jobs during construction and another 1600 during operation. It was predicted that it would generate approximately \$12 billion annually, as well as adding another 100 million tonnes to Newcastle's export capacity.

Along the way, it would address a lot of the complaints from residents over increasing coal train movements in Newcastle, by utilising noise barriers. To reduce dust, barriers would be erected around the stockpile areas and high-density coal storage would further minimise dust as well as fully-enclosed unloading facilities and conveyors.

But like a lot of big ideas from the big man – it would all end in tears with nothing really to show except more enemies and a lengthening string of unpaid bills.

The rise of Nathan Tinkler

Tinkler, whose first minor corporate venture was to start a mining recruitment agency, had a poor record with money. He had lost the family home over missed mortgage payments. Singleton Council, to which he owed \$1,400, had obtained a sheriff's seizure order for Tinkler's clothes dryer, couch, TV, right down to the whipper snipper. Not an auspicious start for a businessman who attracted loans of hundreds of millions of dollars of investors' money in just a few years.

On an ABC '4 Corners' report, a coal industry expert said that getting his coal loader and rail project up would have given Nathan Tinkler: "...one of the most important stakes in the coal chain that runs from north-west New South Wales to the Port of Newcastle and there are no more important elements in that chain than the coal loaders themselves. They are such a fundamental key to the riches that coal generates for New South Wales."

Now, in typical "crash through or crash style", Tinkler stomped over the top of previous plans to avoid creating a coal loader on the former BHP Steelworks site. Instead, he was introducing a multipurpose port terminal concept by appealing to public sentiment

concerned about noise and air pollution.

As the world's busiest coal port, Newcastle's existing coal-loading facilities were located on Kooragang Island, on the other side of Newcastle Harbour from Mayfield. The Newcastle Port Corporation was in the final stages of negotiating with big corporate player, 'Anglo Ports', to build a \$750 million container facility on the old BHP site at Mayfield. All that was needed was ministerial approval.

Since the closure of the BHP steelworks in 1999, the 100ha industrial site, split into two lots, with deep-water wharfage, had sat vacant. The lot of 37ha fronting the port was owned by the Newcastle Port Corporation, which had long planned to build a container terminal that would diversify its reliance on coal exports. However, in 2014 'The Australian' observed:

"But Tinkler had other ideas. A company he had bought into, Buildev, had won a tender to develop the 62ha site behind the planned container terminal. Tinkler wanted to build a coal-loading terminal, despite its close proximity to houses at Mayfield and despite the fact he didn't have the necessary approvals or a lease on the land fronting the port. "What was in this for Buildev? Well, literally, hundreds of millions of dollars," said Geoffrey Watson, counsel assisting the Independent Commission Against Corruption (ICAC).

If Tinkler could scuttle the container proposal and get his coal-loader approved, the value of his land would skyrocket. Tinkler was a major shareholder in the Maules Creek project in northern NSW, the largest coal mine under construction in Australia. If he also had access to a coal loader, he'd turn coal into gold."



A Kooragang Coal Loader. Source: Australian Mining.

But without a detailed set of plans, sceptics in the coal industry claimed the Tinkler proposal was "all icing and no cake" – and so it proved to be, like many of his projects. Still, people living near the Carrington Coal Terminal and the Mayfield coal trains were asking why, if Nathan Tinkler could make their lives better, the rest of the coal industry couldn't do the same.



The Port Waratah rail corridor. Source: ARTC.



Loco 8102 entering Port Waratah at Scholey St Junction from the Main Northern Line in 1982. Source: David Patterson.

In 2012, the NSW Government rejected Tinkler's 'Hunter Ports' proposal for a 5th coal loader. Ironically, it said the creation of the coal loader would generate uncertainty in the industry as it could potentially jeopardize existing coal agreements at Port Waratah Coal Services' proposed new 4th loader. It was proposing to build it in addition to two it already operated and a third operated by the 'Newcastle Coal Infrastructure Group'.



Port Waratah Coal Services Loader served by an extensive rail network at Carrington. Source: PWCS.

However, what would undo many of these plans was the increasing doubt over the future of coal as a fuel and the environmental impacts of dust and noise pollution of coal trains and the loaders on Hunter Region residents. There were also doubts as to whether Hunter Valley rail track capacity would be able to service one new coal loader let alone two without massive new investment. In the end, there would be no 4th or 5th coal loader by 2018 as the coal industry plateaued.



Port Waratah Coal Loading Terminal. Source: Rusted2theRails.



A heritage train passing the Port Waratah Junction in 1985. Source: David Patterson.

But what of the big man who said he would come with an environmentally-friendly coal loader and rail solution - Nathan Tinkler, the former Hunter Valley mine electrician, who became Australia's youngest billionaire at the age of 35?

When Nathan Tinkler worked as an apprentice at BHP's Bayswater open-cut mine he was either fired or given a redundancy package. Nathan was supposedly frequently in debt during his time in the mine and refused to pay or mistreated his lenders. At the age of 26 he began his own mine machines care company. Corporate observer Stephen Long says Nathan Tinkler is:

"A man who started out in the coal pits and ended up owning mines, as well as football teams and a vast stable of thoroughbreds. A blue-collar worker who backed his judgement, took huge gambles and made a billion-dollar fortune."

Tinkler's corporate story started when he shot to fame after he and his mate, family and friends chipped in to scrape \$1m together to buy the Middlemount Coal Deposit in Queensland in 2006. Borrowing the rest of the \$30m purchase price from the financial markets, Tinkler sold Middlemount on to Macarthur Coal barely a year later. Nathan Tinkler became enormously rich when he took a big gamble and won by opting to be paid in shares rather than cash.

No sooner had he acquired those shares, then the Macarthur Coal shares spiked as the price of coal rocketed to all-time highs coupled with sudden speculation that the Company would be subject to a takeover. The Macarthur Coal share price reached \$20, which was more than twice the share price that Nathan Tinkler had done the deal on. He quickly traded the shares for a cool \$442m in cash, essentially having leveraged his original \$1m spectacularly.

Amazingly, Tinkler pulled off a similar business trick in 2009, borrowing heavily to buy the Maules Creek Deposit in New South Wales from Rio Tinto for \$480m and selling it on for nearly \$1.2bn in 2010!

Tinkler's timing was great and so was his eye for what were relatively unloved assets and then turning them into massive windfall profits.



As things got worse, for a time, Nathan Tinkler was kept afloat with a series of loans adding up to \$45m from his racing friend, retail mogul, Gerry Harvey, who I worked for personally at one stage. Source: Daily Telegraph.

Nathan Tinkler spent the money (or other people's by not paying his bills) like there was no tomorrow, or rather, as if his future success was guaranteed. Business people, especially tradies, were owed big sums of money, sometimes for years. Effectively, they were providing interest-free loans to Tinkler's

companies. Some eventually got their money. Others weren't so lucky.

Tinkler made pursuit of his debts through an arcane world of more than 120 different corporate entities in Australia and Singapore (not even counting a multitude of trusts) a daunting task. A lot of them were one or two-dollar shelf companies predominantly in his wife, Rebecca's, name. Meanwhile Nathan Tinkler was plunging sums like \$100,000 on a single horse race, and up to half a million a month. Within 18 months of his big Macarthur Coal bonanza, Tinkler had burnt through nearly all of his cash!

Nathan Tinkler was inclined to make commitments and worry about the money later. This would eventually catch up with him in spectacular fashion but not before as author, Paddy Manning, says:

"In one of the greatest spending sprees of all time, Tinkler splurged hundreds of millions of dollars on his horse stud Patinack Farm, the Newcastle Knights rugby league team, the Newcastle Jets football team, private jets and a helicopter, a fleet of exotic supercars and lavish mansions in Newcastle, Brisbane, Coffs Harbour and Hawaii."

"But Tinkler's strategy of borrowing to buy, prove up and flip undeveloped coal projects, which worked so well in a booming market, left him over-gearred when coal prices slumped."

Soon, everything Tinkler owned was either: draining cash; heavily-mortgaged; on the market; or in his wife's name - or then his mistress's, Jodie Van Gilst.

When he bought Maules Creek he could only find a 5 per cent deposit - \$24 million. No local bank would touch him but Tinkler eventually found the finance in Singapore. But his Singapore hedge fund financiers didn't know that even Tinkler's deposit was mainly borrowed money!

Paddy Manning says:

"Tinkler had to borrow \$500 million in round figures at interest rates of up to 17 per cent, credit card interest rates, and the clincher was he had to give a personal guarantee over his own assets to get the deal away."

Buying Maules Creek was a huge gamble. Yet as coal prices soared, it became a financial bonanza for Tinkler.

In August 2010, just nine months after the purchase, he floated his company 'Aston Resources' for \$1.2-billion. For the second time, he'd made a fortune by punting on coal assets with borrowed money.



Nathan Tinkler with his then wife, Rebecca, and John Singleton in happier times at the 'Magic Millions' horse sale in 2010 before Rebecca discovered that Nathan's secretary, Jodie Van Gilst, was having her boss's baby! Source: Resources2.

Paddy Manning observed:

"Everything Tinkler owns is hocked. His company stakes, his mansions in Maui, in Brisbane, in Coffs Harbour, in Newcastle, at Patinack, right down to the lawnmowers."

Not surprisingly, the Tinkler Group's development company, 'Buildev', struggled to complete projects and was saddled with stranded assets including part of the former BHP steelworks site at Newcastle, where Tinkler's proposed coal loader and railway line were to be built.



Former Mayor of Newcastle and property developer, Jeff McCloy, and former State Labor Member for Newcastle, Jodi McKay. Source: SMH.

This all raised the interest of the New South Wales Independent Commission Against Corruption (ICAC) in 2014, when it was revealed that Tinkler's 'Patinack Farm' horse stud paid \$66,000 to 'Eightbyfive', a slush fund set up by an advisor to corrupt NSW politician, Chris Hartcher. A few days later, text messages presented at ICAC revealed that Tinkler's 'Buildev' had secretly paid \$50,000 to produce anonymous flyers attacking local Labor state parliamentarian, Jodi McKay, after it was claimed he had tried to bribe her in the lead-up to the 2011 NSW election because she opposed his billion-dollar plan to establish a 5th coal and rail terminal. The flyers - titled "Stop Jodi's trucks" - falsely stated that 1,000 trucks per day would trundle past the Mayfield areas' houses because of McKay's support for a container terminal. It was a disaster for her campaign.



Former State Liberal Member for Newcastle, Tim Owen MP, another caught out by ICAC after being ensnared in Nathan Tinkler's web. Source: SMH

In the ICAC hearings, State Liberal MP, Tim Owen, who had beaten Jodi MacKay for the State seat of Newcastle after Tinkler's smear campaign, was found to have taken tens of thousands of dollars' worth of illegal donations from Buildev, and also from the disgraced former Lord Mayor of Newcastle, Jeff McCloy, one of Newcastle's richest men and one of its most prominent developers.



Charlotte Owen. Source: Newcastle Herald.

In what had more twists and turns than a television soap opera, Tim Owen's wife of 21 years, Charlotte, told the 'Newcastle Herald' that she was "absolutely disgusted with her husband" after he had sworn to her "on a stack of bibles" that he hadn't taken any money.



Despite claiming he only had \$2,000 to his name in 2016, after once having \$1.2 billion and being declared a bankrupt with debts of \$540m, Nathan Tinkler still lived in palatial homes owned by his wife or secretary and has been provided with generous allowances from both at times. Source: Port News.

But blow-back from the excesses in the years before didn't stop here. In 2016, Nathan Tinkler offered his creditors less than 0.2 cents in the dollar to settle his \$553.8 million in debts and avoid bankruptcy – he failed.

In 2017, he was disqualified by ASIC from acting as a company director following company failures and appointment of liquidators to a range of his companies. He had allowed a number of his businesses to either trade while they were insolvent, fail to pay taxes (\$106m) and operate at a loss.



Nathan Tinkler and Jodie Van Gilst with an unidentified woman in the foreground. Source: Courier Mail.

And in 2018?

After losing his business empire and his family, Nathan Tinkler cut a sorry figure in pleading guilty to smashing a window at his bankrupt sister's house and being issued with an apprehended violence order. In the process,

the court proceedings preventing him attending his mother's funeral.

Needless to say, Nathan Tinkler's new Newcastle railway line and coal loader look unlikely to be built any time soon!

Meanwhile, Nathan Tinkler is living with Jodie Van Gilst, his former secretary, in a \$13m mansion in her name with their two children.



Former wife, Rebecca, is living in a \$16m mansion in Maui, Hawaii, with her four children by Nathan Tinkler. She is listed in business network - 'Linked In' - as running a firm called 'Panties in Paradise'.

Over the whole sorry saga, as they say in the business world: "While all boats lift on a rising tide, when the tide goes out you can see which swimmers aren't wearing bathers".

'Newcastle and Rail – The Never-Ending Story' will be continued with part 17 of 24, next month...

Contributed by Doug Walker...

We're getting older! Smiles for you

ONE WAY TO FIND OUT IF YOU ARE OLD IS TO FALL DOWN IN FRONT OF A LOT OF PEOPLE. IF THEY LAUGH, YOU'RE STILL YOUNG. IF THEY PANIC AND START RUNNING TO YOU, YOU'RE OLD.

WHEN I GROW UP I'D LIKE TO BE A RETIRED LOTTERY WINNER.

Contributed by Doug Walker...

10 of 81 Crazy Things You Probably Didn't Know About Australia.



Bob Hawke's 11-second mark for downing ale is the stuff of legend around Oxford. Photograph: Mark Metcalfe/Getty Images

Picture accessed from The Guardian - Australia edition...

- 10) In 1856, stonemasons took action to ensure a standard of 8-hour working days, which then became recognised worldwide.
- 11) Former Prime Minister Bob Hawke set a world record for sculling 2.5 pints of beer in 11 seconds. Hawke later suggested that this was the reason for his great political success.
- 12) The world's oldest fossil, which is about 3.4 billion years old, was found in Australia.
- 13) Australia is very sparsely populated: The UK has 248.25 persons per square kilometre, while Australia has only 2.66 persons per square kilometre.
- 14) Australia's first police force was made up of the most well-behaved convicts.
- 15) Australia has the highest electricity prices in the world (has risen unbelievably 2016 – 2019).
- 16) There were over one million feral camels in outback Australia, until the government launched the \$19m Feral Camel Management Program, which aims to keep the pest problem under control.
- 17) Saudi Arabia imports camels from Australia (mostly for meat production).
- 18) Qantas once powered an interstate flight with cooking oil.
- 19) Per capita, Australians spend more money on gambling than any other nation.



Contributed by Wendy Purdie...

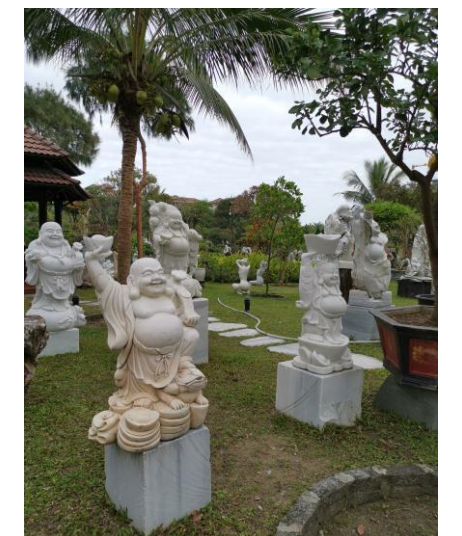
Wendy and Ong’s Singapore and Vietnam Safari 2019/2020 ...



Showroom, Danang, Vietnam.



There are literally thousands of statues and this is only one Factory in a row of many.



Non Nuoc stone carving village, Danang, VIETNAM.



Couldn't believe how primitive the lapidary was. They only had a piece of cloth over their airways.



Family holiday in Danang. Wendy her sis-in-law Fong and daughter Ling.

Wendy and Ong’s Singapore and Vietnam Safari 2019/2020 – Continued...



At the beach outside our Naman Villa.



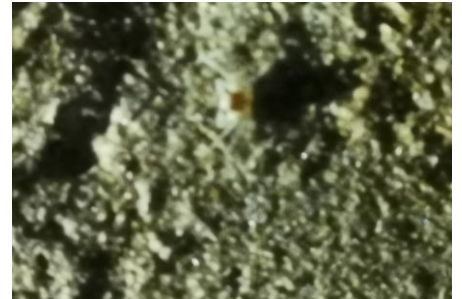
Just outside our villa is the South China Sea. Not able to swim as it was quite rough and consequently dangerous with some rips visible.



Tried very hard to fit these Marble statues in my backpack.



Today, I went to learn pottery. Did get some help to refine my jug.



Oops! Forgot to say, 'Spot the crab.'



Wendy getting flexible in Aqua Yoga class.



My husband Ong has a go at the pottery as well.

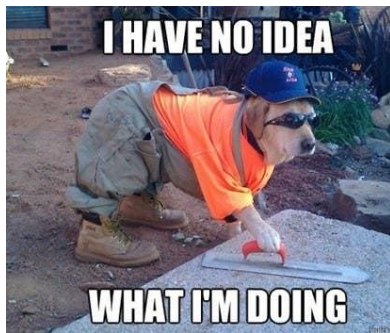


Enjoying the ambience of the infinity pool. Wendy her sister in law and daughter.

Column One for Dogs



Our wireless doorbells sitting on their chargers.



Don't ask! But yes, I could use some help.



Column Two for Dogs

Police came round last night and told me my dogs were chasing people on bikes.
My dogs don't even have bikes.



Dog noses look like angry Aliens.



Help!



Enjoying some pussy.



Hey! Behave you two, this is a family photo shot!

Column Three for Dogs



Contributed by Augie...



You can see it, but can you sing it?

I HATE IT WHEN PEOPLE
ACT ALL INTELLECTUAL
AND TALK ABOUT
MOZART WHILE THEY'VE
NEVER EVEN SEEN ONE
OF HIS PAINTINGS...

Three drunk guys entered a taxi.
The taxi driver knew they were
drunk, so he started the engine
and turned it off again.
Then he said, 'We have reached
your destination.'
The first guy gave him money.
The second guy said, 'Thank
you.' The third guy slapped the
driver.
The driver was shocked, thinking
the third drunk knew what he did.
But then asked, 'What was that
for?'
The third guy replied, 'Control
your speed next time, you nearly
killed us!'

Try to remember,
the greener grass
across the fence
may be due to a
septic tank issue.

Contributed by Doug Hughes...

Analytical Approach to Life

DID YOU KNOW THAT

THERE ARE MORE AIRPLANES
IN THE OCEANS,
THAN
SUBMARINES IN THE SKY?

"Do not touch" must be
one of the scariest
things to read in Braille



This cow has two more faces.

Contributed by Doug Walker...

An Australian Christmas Poem from 1911

Henry Lawson
Great Australian Storyteller

A BUSH FIRE.

One Christmas-time, when months of drought
Had parched the western creeks,
The bush-fires started in the north
And travelled south for weeks.
At night, along the river side,
The scene was grand and strange;
The hill-fires looked like lighted streets
Of cities in the range.

The cattle tracks between the trees
Were like long, dusty aisles,
And, on a sudden breeze, the fire
Would sweep along for miles;
Like sounds of distant musketry
It crackled through the brakes,
And o'er the flat of silvery grass
It hissed like angry snakes.

It leapt across the flowing streams,
And raced o'er pastures broad;
It climbed the trees and lit the boughs,
And through the scrub it roared.
The bees fell stifled in the smoke
Or perished in their hives,
And, with the stock, the kangaroos
Went flying for their lives.

—Henry Lawson.

Though the struggle be grim, 'tis Australia that knows,
That her children shall fight while the waratah grows.



Contributed by Augie Gray...

An Aussie Poem

I love a Sunburnt country, a land of sweeping plains
But I've gotta tell ya mate, I like it better
when it rains.

The countryside is dying and there's just no
end in sight
And just to rub salt in the wounds, the bush
has caught alight

The landscape is on fire from Brisbane to the
Gong
And everybody's asking, "Where the hell did
we go wrong?"

But we can get through this one if we help
each other out.
Take care of your neighbour, that's what
Aussies are about.

The rain is going to fall again, the good times
will return.
But living in Australia means - at times it's
going to burn.

So, if you need a helping hand, just give a
mate a call.
We're all here to help you out and catch you
when you fall.

The RFS, the SES, the fireys, the Police,
All put their lives upon the line to help beat
this beast.

So, hats off to these heroes and thanks for all
you do.
And I hope when this is over we can make it
up to you!

By Troy Gerdes.



Contributed by Allan Rudd...

Bread is a lot like
the sun,
it rises in the yeast
and sets in the waist.

Nurse came in and
said doc, 'There's a
man in the waiting
room who thinks
he is invisible, what
should I tell him?'
The doctor said, 'Tell
him I can't see him
today'.

I am so old that,
when I was a kid,
we actually had
to win to get a
trophy!

So, if a cow
doesn't produce
milk, is it a milk
dud or an udder
failure!



WARNING

There is an email going
around offering processed
pork, gelatin and salt in a
can.

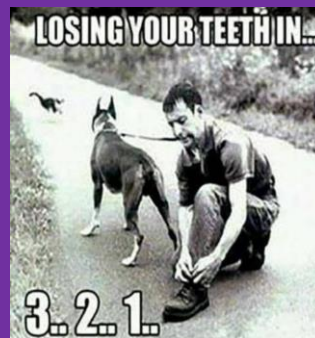
If you get this email, do
not open it. It's spam.

Contributed by Augie Gray...

Hyphenated.
Non-hyphenated.
Oh, the irony.



Botryoidal Malachite from the Congo.





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Apache Gold	Labradorite	Orthoceras	Ruby in Zoisite
Aquamarine	Lapis Lazuli	Owyhee Blue Opal	Scolecite (pink)
Asteroid Jasper	Larimar	Parral Dendrite Agate	Septarian Nodule
Azurite	Larvikite	Peanut Wood	Seraphinite
Bloodstone	Lepidolite	Peruvian Blue Opal	Solar Quartz
Blue Lace Agate	Malachite	Peruvian Pink Opal	Sonora Dendritic Opal
Botswana Agate	Maligano Jasper	Petrified Palm	Spiderweb Jasper
Brecciated Jasper	Marcasite	Petrified Palm Root	Stromatolite
Bronzite	Marcasite in Quartz	Picasso Jasper	Sunstone
Bumble Bee	Marcasite (Nipomo)	Pietersite	Thulite
Burma Jadeite	Maw Sit Sit	Pinolith	Tigereye
Blue Chalcedony	Moonstone	Polish Agate	Tigeriron
Charoite	Morado Opal	Polychrome Jasper	Turkish Stick Agate
Chrysocolla	Moroccan Seam Agate	Poppy Jasper	Turquoise
Covellite	Moss Agate	Prehnite	Turritella
Crazy Lace Agate	Noreena Jasper	Psilomelane (Dendritic)	Unakite
Dendritic Agate	Obsidian (Gold Sheen)	Pyrite Druzy	Verdite
Dendritic Opal	Obsidian (Silver Sheen)	Pyrite in Quartz	
Dinosaur 'Gembone'	Obsidian (Copper Sheen)	Rainforest Jasper	
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2020 Happy New Year



2020 Start Dates

Club monthly meetings resume on Thursday 6th
February
