



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
Secretary: Claudia Gill. 0419 841 473 Email: cjrgill@adam.com.au
Treasurer/Membership Officer: Augie Gray: 0433 571 887 Email: bluedog50@optusnet.com.au
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Web Address: <https://teatreegullygemandmineralclub.com>

**March
Edition
2020**

"Rockzette"

Tea Tree Gully Gem & Mineral Club News

President's Report

Hi All,
 After a few trips to the bank we have it all sorted out. Now, Augie can pay the bills on-line.
 Cheers,
 Ian.

General Interest

Page 6:
 Augie's March 2020 Birthstone Selections...



Pages 7 to 9:
 Ian's March 2020 Quartz Collection Selections...



Pages 10 to 16:
 'Newcastle and Rail – The Never-ending Story' ...



Pages 16 to 19:
 General Interest, humour, etc...



Page 20:
 Members' Noticeboard and Links...

Club Activities / Fees

Meetings
 Club meetings are held on the 1st Thursday of each month except January.
 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

Diary Dates / Notices

Happy Birthday

Members celebrating March birthdays:

04th – Eirene Smith. 10th – Dieter Zoyke.
 26th – Mary Warner.

Pages 2 to 4:
 Augie's March 2020 Jasper Selections...



Pages 4 and 5:
 Augie's March 2020 Mineral Selections...



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 March 2020 Jasper Selections – Mexico.

Imperial Jasper

Imperial Jasper is considered to be one of the five “fine” Jaspers. (The other fine Jaspers are Bruneau, Morrisonite, Willow Creek and Blue Mountain). Imperial Jasper is found about 50 miles northwest of Guadalajara, Mexico on the east side of a steep canyon. This canyon lies north of the small town of San Cristobal and its steep slopes are covered with dense vegetation. The jasper-bearing area is very large, almost 6 km long with many individual deposits, each with its own characteristics. Pink Imperial, Brown Imperial, Green Imperial, Spiderweb Imperial, Select Imperial, and Royal Imperial are all names associated with these various Jasper deposits.

The Jasper occurs as veins, large filled vugs, and as nodules in the host rock. Pieces over 100 lbs. in size have been recovered, but due to extensive natural cracking in the deposit most material is much smaller.

The deposits are also rich and concentrated. In the last decade over 100 tons of Imperial Jasper has been mined. Most of the deposits are under claim, but the claim rights are complicated by multiple land owners. The amount of Jasper produced from this area far exceeds the total lifetime production of all the other fine Jaspers listed above.

Royal Imperial Jasper is found primarily in a side canyon over the ridge to the east of the other Imperial Jasper deposits. It is somewhat different in that it is formed entirely as nodules. The nodules are generally small and flat in size (about 2”), and have a smooth, soft white or orangish chalky outside.

The material is considered a fine porcelain Jasper and it makes wonderful patterned, unique cabochons with a great polish.

The Royal Imperial Jasper is known for having a high percentage of the “egg” pattern. What makes this deposit so unusual is that it is the finest, largest deposit with egg patterning known in the world to date.



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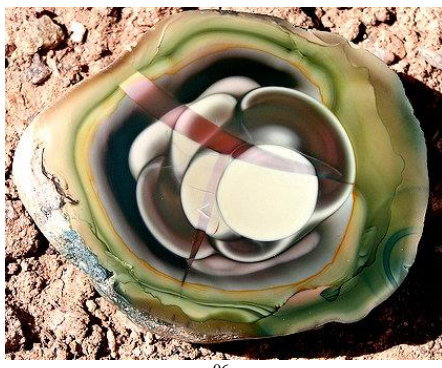
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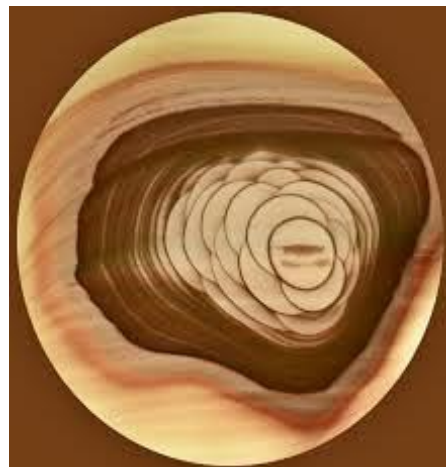
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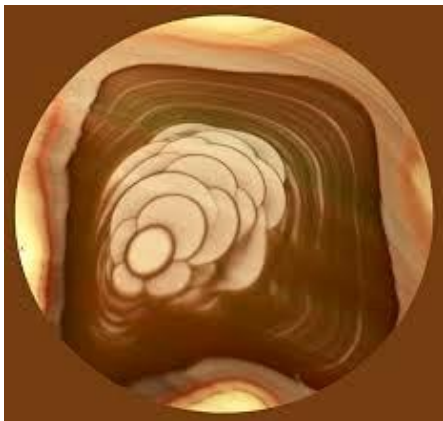
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Augie's March 2020 Jasper Selections
– Mexico. *Continued...*



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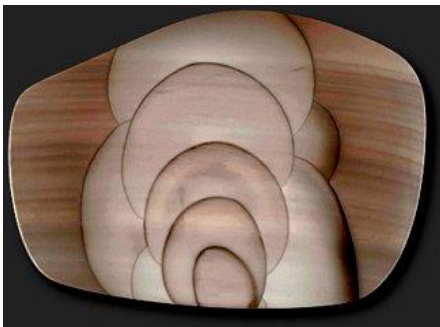
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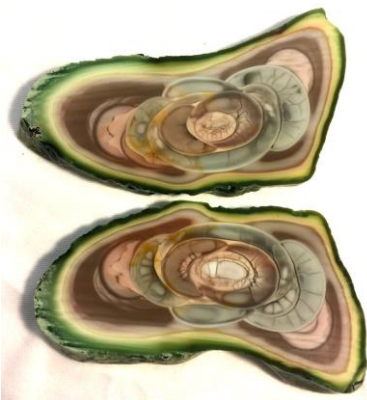
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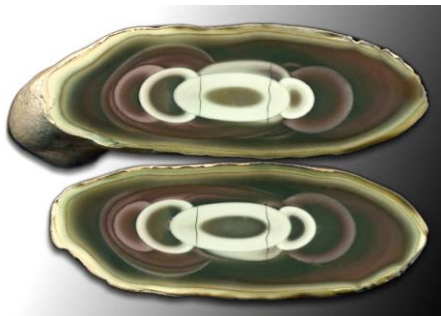
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Augie's March 2020 Jasper Selections
– Mexico. *Continued...*



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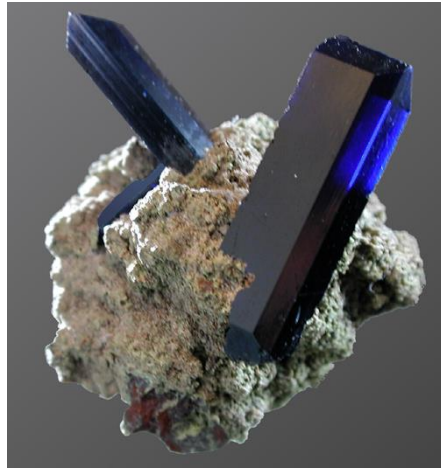


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Augie's March 2020 Mineral Matters Selections...



Amazonite, Smoky Quartz & Goethite – Colorado, USA.



Azurite - Tsumeb Mine, NAMIBIA.



Gypsum - Buckleboo, Eyre Peninsula, SOUTH AUSTRALIA.



Amethyst – SARDINIA.



Aragonite - Minglanilla, SPAIN.



Gold - Mother Lode mine, California, USA.

Augie's March 2020 Mineral Matters Selections... Continued...



Fluorite - CHINA.



Mimetite - San Pedro Corralitos Mine, Chihuahua, MEXICO.



Pyrite 'Sun' - Sparta, Illinois, USA.



Pyritized Ammonite - Volga River Formation, RUSSIA.



Quartz - Serifos, GREECE.



Rainbow Fluorite.



Tourmaline - Pederneira Mine, São José da Safira, Doce Valley, Minas Gerais, BRAZIL.



Watermelon Tourmaline.



Vanadinite on Baryte.



Vivianite - Ouro Department, BOLIVIA.



Wulfenite - Touissit, MOROCCO.

Augie's March 2020 Birthstone Selections...

Aquamarine – Birthstone for March



Aquamarine is one of the 4 varieties of Beryl, the others being Emerald (green) Heliodor (gold), Morganite (pink), Goshenite (colourless) and Bixbite (red and extremely rare).

Tech. Stuff

Chemical composition – Beryllium Aluminium Silicate ($Be_3Al_2(SiO_3)_6$)
 Hardness – 7.5 to 8.0
 Specific Gravity – 2.72
 Refractive Index – 1.577 to 1.583
 Birefringence – 0.005 to 0.009
 Crystal System – Hexagonal
 Cleavage – 3,1 – basal
 Fracture – Uneven to conchoidal
 Lustre – Vitreous

Aquamarine is generally found in granite pegmatites. It also occurs in metamorphosed Mica schists and igneous Rhyolite deposits. It often forms in perfect, six-sided hexagons. Crystals are usually individual prismatic hexagons which may be gigantic in size - some 30 feet long (8 metre), well-crystallized examples have been found. Crystals may also be short and stubby, and occasionally form as tabular crystals and plates. Crystals may be vertically striated.

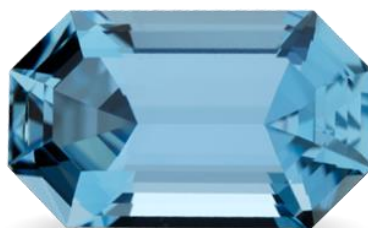
Brazil has been the prime supplier of Aquamarine for hundreds of years – 2019 celebrated the 300-year anniversary of the Minas Gerais mines, which are still producing today. The Santa Maria Aquamarine is a uniquely saturated blue gemstone originally mined in Santa Maria de Itabira. They are the most valuable and sought after but unfortunately the original mine has been virtually exhausted. The term Santa Maria can now refer to an Aquamarine crystal from anywhere but possessing this unique colouring and saturation; those found in Mozambique and Zambia have been dubbed Santa Maria Afrique to distinguish them from the Brazilian mine.

Other important sources of Aquamarine include Pakistan, Kenya, Zambia, Nigeria, Madagascar, Mozambique, China, Myanmar, Russia, Ukraine and Colorado in the U.S.

Pakistan is one of the emerging sources, producing beautiful, water clear stones from

high in the mountains in the northern part of the country. Mines are mostly in the Gilgit-Baltistan region, including the Shigar Valley, as well as the Hunza and Braldu Valleys, and the mines are at an elevation of up to 4,000 metres.

The largest cut specimen of Aquamarine is the “Dom Pedro”, now part of the Smithsonian National Gem and Mineral Collection. Sometime in the 1980s, prospectors found the stone in a mine in Minas Gerais. Originally three feet long and weighing nearly 100 pounds, it was dropped by the prospectors, breaking into three pieces, two of which were sold by the mine owner to be cut into anonymous stones for jewellery. The largest piece escaped that fate; it was named the Dom Pedro, after the first emperor of Brazil, in the 19th century, and his son of the same name, who was the last. The stone traced a circuitous path to the German workshop of gem artist Bernd Munsteiner who, in the early 1990s, was moving toward using crystals as the raw material of sculpture, rather than for rings and pendants. Munsteiner studied the crystal for 4 months, sketching hundreds of designs. As a concept formed in his mind, he named his design *Ondas Maritimas* (“Waves of the Sea”). He drew dozens of grooves, or “negative facets,” at different angles, trapping the ambient light. At last he picked up a diamond-coated cutting wheel; it took some six months to turn the stone into a finished sculpture, weighing in at 10,000 carats (2 kg.)



Dom Pedro 1.



Dom Pedro 2 and 3.

Ian's March 2020 Quartz Collection Selections...



2823 (Before HCL) Quartz with inclusions, Manganese Hill Area, Zeehan, TASMANIA.



2823 (After HCL) Quartz with inclusions, Manganese Hill Area, Zeehan, TASMANIA.



0016 Quartz with Chlorite Inclusions, BRAZIL.



0071 Quartz and Fluoroapatite, Panasqueira, PORTUGAL.



0187 Hematite and Quartz, Cumbria, ENGLAND.



0517 Quartz on Fluorite, Cumbria, ENGLAND.



0036 Quartz, Arkansas, USA.



0072 Quartz, Fluoroapatite and Mica, Panasqueira, PORTUGAL.



0525 Quartz on Calcite and Pyrite, Trepca, KOSOVO.

**Ian's March 2020 Quartz
Collection Selections - Continued...**



0653 Amazonite and Smoky Quartz, Crystal Peak, Teller Co, Colorado, USA.



0686 Calcite on Quartz, ROMANIA.



0696 Dolomite on Quartz, ROMANIA.



0730 Smoky Quartz, Unknown Location.



0733 Quartz, Tooele Co, Dugway Ranges, Utah USA.



0840 Pyrite and Dolomite on Quartz, Panasqueira, Beira Co, Baixa, PORTUGAL.



0841 Dolomite on Quartz, Panasqueira, Beira Co, Baixa, PORTUGAL.



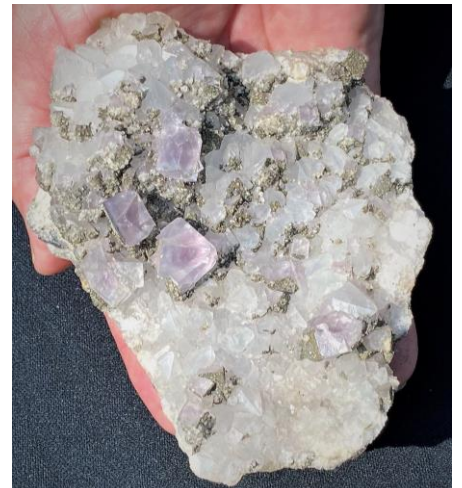
0852 Quartz on Fluorite, Cumbria, ENGLAND.



0859 Quartz, Ohio Mine, Ouray, Colorado, USA.



0966 Quartz Calcite and Goethite, Marrakesh, MOROCCO.



0967 Fluorite and Pyrite on Quartz, Blackdene Mine, Weardale, DURHAM.



0986 Quartz, Apatite and Arsenopyrite, Panasqueira, PORTUGAL.

**Ian's March 2020 Quartz
Collection Selections - Continued...**



0983 Calcite on Quartz, Cavnic, ROMANIA.



1167 Quartz [Jap Twin], Mundo Nuevo, PERU.



1753 Quartz with Fuchite Inclusions, Ivohitra Fianarantsoa Prov, MADAGASCAR.



2679 Quartz on Sphalerite and Pyrrhotite, Trepca, YUGOSLAVIA.



2821 Quartz, Duffy Road, McKinnons Point, Freestone Creek, VICTORIA.



2822 Quartz and Stibnite, Hillgrove, Northern Tablelands District, NEW SOUTH WALES.



0432 Calcite on Quartz, Rio Grande do Sol, BRAZIL.



0917 Calcite on Quartz, Irai Rio Grande du Sur, BRAZIL.



1356 Prehnite on Quartz, Kharau Baluchistan, PAKISTAN.



1357 Prehnite & Schorl on Quartz, Kharau Baluchistan, PAKISTAN.



1024 Quartz, HIMALAYERS.



1358 Prehnite on Quartz, Kharau Baluchistan, PAKISTAN.



2041 Quartz with Hematite Inclusions, Rum Jungle Mine, NORTHERN TERRITORY.



2650 Quartz Faden, Dara Ismael, South Waziristan, PAKISTAN.



2652 Quartz Faden, Dara Ismael, South Waziristan, PAKISTAN.



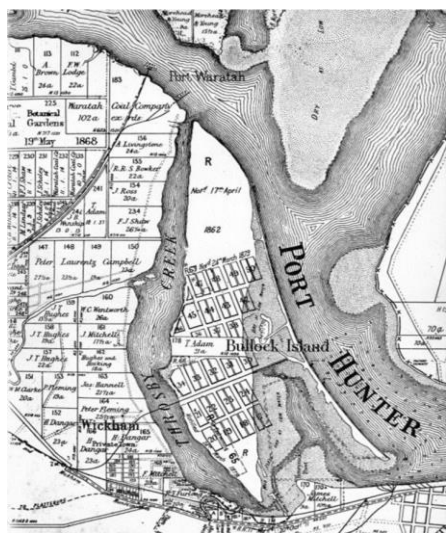
2410 Quartz, Amethyst Castle, Selwyn, QUEENSLAND.

Contributed by Mel Jones...

‘Newcastle and Rail – The Never-ending Story’ by Garry Reynolds Part 17 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*.



Port Waratah with its railway and wharfage nestled adjacent to the Hunter River Estuary. Source: *Edumford*.

The Waratah Coal Company arises and sets the beginning of today’s massive Port Waratah

The Directors of the Waratah Coal Company envisioned great things in 1863 when they opened for business adjacent to the Hunter River Estuary at Newcastle. The site had a lot going for it from the very beginning with the Company’s construction of a short private branch railway line and sidings from the NSW Government’s Great Northern Railway at Islington. This main line had only recently been completed between Maitland and Newcastle when the NSW Government took over a failed private railway company.

Even the most optimistic promoters could never have envisaged the massive developments that would take place here around the coal and rail industry right into the 21st century when Newcastle became the world’s leading coal export port and Port Waratah would be at its centre.



Newcastle Coal Terminals and Loaders with T1 Port Waratah on the left, T2 Kooragang Island on the far right and T3 Kooragang Island in the middle all served by an extensive Coal Chain rail network stretching up the Hunter Valley. Source: *PWCS*.



The Hunter Valley Coal Chain – major railway loading points, mines and power stations with yellow dots. Source: *Slideshare*.



Port Waratah T1 Terminal. Source: *Triplem*.

The Waratah Coal Company invested heavily in the latest equipment including two coal shoots for loading coal into ships and imported railway locomotives from Great Britain despite the recession in the coal industry at the time.

The Colliery near the wharf site had a thick seam of good quality clean coal that enjoyed a considerable cost advantage in not requiring steam-driven lifting or pumping machinery as the addits (tunnels) ran horizontally into the side of a coal-rich hill.

Adjacent to the Colliery was the Hunter River Copper Works which smelted up to 30,000 tons of copper ore per year. The ore was brought direct from Wallaroo in South Australia by the ships of the ‘Black Diamond Line’. The Works was supplied with coal from the Waratah Colliery by two high-level railway lines connected with the Waratah private branch line. The high-level lines ran parallel to two copper smelter sheds containing the furnaces which were fed fuel from above.

However, by the early 1870s, the Waratah Coal Company faced difficult times when the coal reserves near Port Waratah were becoming exhausted. In 1873, it purchased land 10kms South near what is known today as Charlestown (named after the original mine manager, Charles Smith). The Waratah Coal Company built a private railway running North to Islington Junction before branching onto the old line to the loading facilities still at Port Waratah.

In 1888, during a strike at the Waratah South

Colliery, eight houses were built by the Company for strike breakers – this became known as ‘Scab Row’. However, while in 1902, the Colliery employed 520 men and boys, it experienced many openings and closures and changes of ownership over the years as thin seams and the capital ran out quickly with only short term profits.



Crossing Lambton Road on the Gully Line on the way to Port Waratah. Source: *Newcastle Herald*.

Until mid-1955, a daily private steam-hauled which the Mine workman’s train ran on what had become known as the ‘Gully Line’ (abbreviated from the Raspberry Gully Pit) from Broadmeadow to Kotara South. In an interview with Newcastle Herald journalist, Mike Scanlon, in 2015, local identity, John ‘Tiger’ Shoebridge recalled how at the Raspberry Gully Mine Site, a village sprang up that almost ran to its own time clock. ‘Tiger’ said:

“It was a world of its own, with its own train service, its own power supply, its own church and even ran to its own time dictated by the approaching train (from Broadmeadow with miners). It would blow a whistle and the pit whistle would reply. That meant it was seven o’clock Gully Time (shift start), no matter what the real time was if the train was delayed or late.”

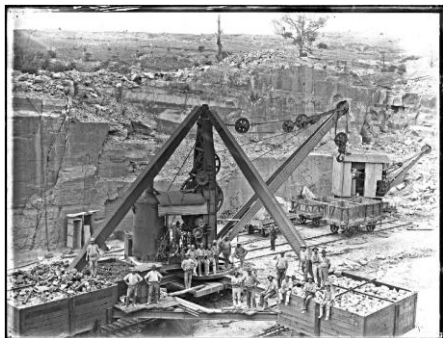


Waratah South Colliery in 1894. Source: *NSW State Records*.

Continued next page...

'Tiger' recalled that pit horses were used at the South Waratah Colliery until mechanisation in 1956. He remembers seeing the Mine Manager and the Ostler (person in charge of the horses) breaking open clods of manure and smelling them to determine the horses's health after they came out into the sunlight from spending the week stabled and working underground. Tiger instantly deduced that was a job he would never aspire to! The Mine closed in 1961.

The Waratah Company also owned the Waratah Quarry near its original mine. It was later used by the NSW Government to supply much of the heavy stone for the construction and enlargement of the critical breakwaters at the dangerous entrance to Newcastle Harbour.



Waratah Quarry 1900 in during construction of the Stockton Breakwater. Source: UON.

Newcastle Harbour Expansion

While the Waratah area had its ups and downs with the health of the coal industry, the wharfage and the rail facilities kept expanding at Port Waratah in tune with the growth of the port. The first phase of development of the harbour facilities (1804-1850) saw relatively slow development due to Newcastle's role as a penal colony until 1823. Then the Australian Agricultural Company thrived on its Government-assisted domination of coalmining in the area. This period was followed by one of enormous development (1850-1900) stimulated by the shipping needs of Newcastle's developing coal industry.



Plate 10: Plan of Newcastle Harbour with manmade foreshores shown in broken lines from T. Callen, Bar Dangerous.

Since the early years, the Hunter River Estuary was gradually being transformed from a natural series of mudflats and shallow channels to a major deep-water trading port. The NSW Colonial Authorities invested a lot of public funds (succeeding convict labour) into reshaping the Harbour through dredging, rock blasting and reclamation based on a plan by visionary engineer, E.O. Moriarty, from the early 1860s after the railway arrived at Newcastle.

Coal loading was the primary activity at 'The Dyke' wharves built from a massive reclamation scheme combined with ships ballast. This work created the suburb of Carrington on what was originally a series of mud flats called Bullock Island.



Looking across from Honeysuckle Station on the Newcastle Station Branch across to Bullock Island Bridge and its collieries in 1900. Source: Newcastle Herald.

Edward (Ted) Coulin has written a fascinating story – "The History of Carrington" - which reveals the massive effects on people's lives that the expansion of the wharves and more especially the railway network had on Carrington and neighbouring Port Waratah.

The suburb was initially created by 'The Dyke' which was a long loading wharf constructed from the rock ballast of sailing ships from around the world. Any future archaeologist would probably be totally confused should they excavate! But as steam started replace sail, there was less rock ballast available as the steamers used water for ballast. To continue the massive Newcastle Harbour remodelling through the latter 19th century and early twentieth, large steam dredges were imported to draw sand and silt from the Harbour to backfill behind The Dyke wharves and create a large expanse of slightly undulating low-lying land.

A busy but polluted Carrington

The reclaimed land initially attracted a residential boom, but as the Port developed, more of the reclaimed land was resumed for wharfage with cranes, numerous railway sidings, a hydraulic pumping station to drive the cranes and supporting industries.

It also provided many hotels and boarding houses for the masses of sailors who arrived and waited for their ships to be loaded, in busy times running to weeks and months if there was industrial action in the coalfields, on the railways or the wharves. Newcastle was a strong union town.

Amongst all this development there were swales in the reclaimed land which held swamps or stagnant water. This was a conduit for diseases exacerbated by residents covertly tipping night soil on vacant land. The human waste entered the shallow water table just below the surface which frequently polluted residents' wells with dire results for their health.

There was plenty of noise pollution too. Aside from the sounds of the steam trains and the

bangs of their shunting efforts, there was also noise from the large numbers of cattle and horses. They passed through the Carrington at all hours of the day and night to be loaded onto vessels at Port Waratah for slaughter elsewhere as refrigeration and chilled meat was rare for domestic markets.



The busy Basin at Carrington in 1910 with Honeysuckle Station in the foreground. Source: Wikimedia.

The sailors too brought many diseases from overseas including typhoid and cholera which were exacerbated by regular rat plagues on Carrington.

The sailors, when drunk, which was often, proved a menace to the local citizens, especially women in the poorly-lit streets.

Other threats to families came from the New South Wales Government Railways' (NSWGR) focus on making a significant profit from the Newcastle coal shipping industry. It saw the provision of pedestrian bridges for the public over its railway lines as an annoying cost burden and tended to minimise them. There were regular reports of adults and children being injured or killed by trains shunting through the multiple sidings at Carrington and Port Waratah. At one road crossing in the 1890s there were more than 200 train movements per day.

At night, the lines were poorly lit and there were fears that someone would be killed crawling under or over the coal wagons. These proved to be real, when in the early hours of 27 August 1889, a seaman returning to his ship was struck by a shunting train and had a leg and arm almost severed. To expedite medical attention, he was placed on the steam locomotive and conveyed to Newcastle but died the next day.



On a tight timetable on the Main Northern Line a hard-working locomotive 5365 hauls wooden coal hoppers to the Port of Newcastle. Source: steamtrainstories.

The collieries arrive on Carrington

Of course, all the economic activity provided a jobs bonanza, especially for working class

people who needed to live close to their work. Added to the coal supply chain hub at Carrington and Port Waratah (which the Railways persisted in calling the old name of Bullock Island), there was also several collieries. While they had considerable initial capital expense in boring down many metres to the coal seams under the Carrington, they saved considerable sums on operations being so close to the steam, then hydraulic and later electric shipping cranes.



The Wickham Bullock Island Coal Mining Company rail yard. Source: NSW State Records

'Wickham Bullock Island Coal Mining Company', commenced operations in 1883 through to 1905 by sinking a shaft at Wickham, adjacent to the railway line running across a bridge to Carrington, because residents on the Island feared the underground practice called 'coal pilfering'. This occurred when greedy mine owners, who originally may have left sufficient supporting pillars to suspend the mine gallery roofs in bord and pillar mining, came back over old galleries and took away some supporting pillars causing subsidence on the surface. This occurred in Carrington for decades where water and sewerage pipes were broken, houses undermined, windows and doors tightly jammed, and sections of streets sunk. So close to the surface was the water table and so shallow the piers on some buildings, including a local church, that they blew over in strong winds.



Sinking of a caisson shaft behind The Dyke to build the Hetton Colliery in 1877. Source: NSW Records.



Bullock Island (Carrington) with coal wagons and the two collieries in the background and the Hydraulic Pump House in the middle to drive the loading cranes on The Dyke. Source: State Library of Victoria.

Hetton Colliery opened at Carrington in 1888 and mined under the Harbour and out to sea for kilometres in subsequent years. Local residents became alarmed initially with the Mine's direction and expressed this to a Royal Commission. They feared the Harbour would be drained by the Mine!

In 1896, as the docks kept expanding on Carrington, tenders were called to operate the loading system from rail wagon to ship. Interestingly, a cooperative formed by the workers themselves – 'The Crane Employees' Association' - won the right to load coal at The Dyke. The Association had registered as 'The Carrington Co-operative Coal Shipping Company Limited' using capital contributed by the workers saving over a period of 7 years from their employment on other Newcastle wharves. The Cooperative erected large stables close to the Harbour to house the horses which were key parts in the process of shunting the wagons brought in by steam trains to the cranes. Later, the horses were replaced by hydraulic-driven capstans with chains.

The following year, 1897, ended on a sad note for Carrington on 17 December, when James Rice, a rail crossing gatekeeper, was struck by a tank engine and decapitated. The intensity of the rail network and operations were revealed at the inquest when it was found that on his own he had to manage four gates while being responsible for manually signalling train movements.

An area at the Northern end of Carrington around Port Waratah was leased to the Sulphide Corporation based at Cockle Creek. Cattle and sheep wharves were also established near here at Port Waratah. Horses were shipped from these wharves during the Boer War (1899-1902) with the men who had enlisted from the Hunter Valley.



The Dyke on the seaward side and The Basin to the right with the Hydraulic Pump House in the middle of the network of railway lines in 1904. Source: NSW Library

More Port expansion

Nearing the end of the 19th century, as ships became larger, there was an urgent need not only to reclaim more of the Harbour but deepen its channels and berths in the process of dredging. In 1890, the Newcastle Chamber of Commerce reported that several English merchants had complained that they were incurring: "very great loss ... in consequence of a number of vessels not being allowed to load to their full draughts".

Turnaround times were also a problem, with some ships waiting up to two months for a berth, lying up to five abreast. In many cases, the ships were sent to Sydney rather than Newcastle to load. Meanwhile, behind 'The Dyke', tie up dolphins were provided in the port area being excavated called 'The Basin'. But wharves were not completed to take deep water ships until after 1900.

Into the 20th century, things got even more hectic in the coal supply chain. The NSW Government purchased the old private coal railway which ran from South Waratah Mine near Charlestown to Port Waratah just at the North end of Carrington. It was part of a plan to bring the increasing quantities of coal to the port not only through the established Southern entrance to the Carrington's burgeoning Dyke and Basin loading facilities but from the North as mining spread further up the Hunter Valley past the established Maitland District to Kurri Kurri and Cessnock and beyond.



The Dyke on the seaward side and The Basin to the right with the Hydraulic Pump House in the middle of the network of railway lines in 1904. Source: NSW Library



Aberdare Colliery at Cessnock with its rail connection to Port Waratah. Source: Bing Images.

This expansion involved reclaiming the Northern part of Throsby Creek and remining North Carrington mud flats to make provision for the storage of 5,000 coal wagons on a vast network of sidings opened at Port Waratah from 1908. A new locomotive depot, turntable and coal stage would be established there to handle the increased traffic coming through the traditional path from the South but now through Tighes Hill and Scholey St Junction from the North.



The Dyke Railway Yard at Carrington. Source: Newcastle Herald.

Meeting the challenge of a silting Harbour

The nature of the Harbour with large amounts of mud and silt coming down the Hunter River from its large catchment, combined with wave action pushing sand into the Port of Newcastle,

Meeting the challenge of a silting Harbour

Continued...

eventually forced the NSW Government not only to continually dredge but to lengthen the Southern Breakwater (going back to convict times with Macquarie Pier) and build one at Stockton on the Northern Entrance using a railway line along it to deposit large rocks.



Crowded coal loading at No. 11 hydraulic crane in 1897. Source: Newcastle Herald.



No 15 Hydraulic crane run from a steam driven hydraulic pump house loading coal at 'The Dyke' in 1904 by lifting wooden coal hoppers from their fixed four-wheel bogies. Source: Newcastle Herald.

Meeting the challenge of a silting Harbour

The nature of the Harbour with large amounts of mud and silt coming down the Hunter River from its large catchment, combined with wave action pushing sand into the Port of Newcastle, eventually forced the NSW Government not only to continually dredge but to lengthen the Southern Breakwater (going back to convict times with Macquarie Pier) and build one at Stockton on the Northern Entrance using a railway line along it to deposit large rocks.



Construction of the Northern Breakwater at Stockton. Source: Newcastle Herald.

At the beginning of the 20th century, owing to the tight finances of the Government, a number of old wrecked vessels, which fortuitously lay along the proposed line of the Northern Breakwater, were included in its construction. The wreck of the large French barque, Adolphe, was dragged into position as part of the ghostly

row of hulks. Then it was decided to quickly fill in the gaps to prevent more sand entering Newcastle Harbour. In 1905, two old passenger steamers, 'Elamang' and 'Katoomba' were scuttled in a straight line between several other wrecks filling larger gaps in the Northern Breakwater and smaller gaps were filled by sinking old punts into position. While 'cheap and nasty', the technique was successful in inhibiting the movement of sand into the Harbour for a period. However, not everybody was happy. Shipping companies and mariners complained that completion of the Northern Breakwater created new currents which forced their ships onto sandbanks in the Harbour.

To overcome the problem, it was decided in 1913 to extend the Southern Breakwater. It really all seemed like expensive trial and error. Irate protestors felt that such an extension would cause banking up of large volumes of floodwaters with a narrowed exit and so create flooding further up the Hunter River.

The problems didn't end there. The Government was finding the removal of silt from the Harbour an expensive, growing and ongoing process, especially as it was being carried out to sea, weather permitting, for no productive purpose. It was not popular with Newcastle's sea fishermen either!

To maximise its investment in dredging, the Government decided to reclaim an area between Carrington and Stockton which would include three small islands (Goat Island, Spectacle Island and Pig Island) and a large mud flat. Work had begun as far back as 1897 with the construction of a stone wall at the Southern end of the site, and all the material previously dumped at sea was discharged into this area. The newly-formed island was named after a senior Public Works engineer, Henry Deane Walsh – 'Walsh Island'. Reclamation work continued until 1918, when the Island measured about 160 hectares.

Following the sale of the Cockatoo Island Dockyard to the Federal Government in 1913, the NSW Labor Government decided to establish a dockyard at Newcastle where dredge repair, construction and general engineering work could be carried out. It was just in time for the challenges of WW1.

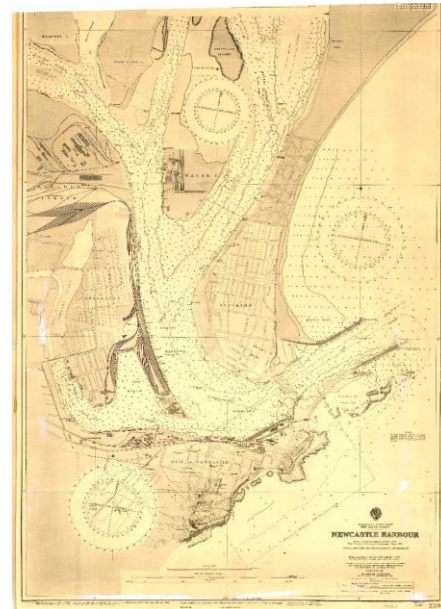
Meanwhile, it never seemed that the breakwaters were ever finished. After severe storms in 1921, it was decided to dump five 50-ton reinforced concrete blocks on the Southern Breakwater and then when another large hole appeared in 1925 another five big blocks.



Hetton Colliery with its undersea underground galleries and different grades of coal in the wooden rail hoppers on Carrington behind the The Dyke. Source: University of Cambridge.

Carrington development plans stymied

Meanwhile, despite all the Harbour works, the start of World War I in 1914 was to have a significant effect on the plans for Carrington. The provision of further railway facilities had been based on a continuation of the increasing coal trade, which in 1913 reached a record of 5,236,621 tons.



A plan of the Newcastle Harbour shipping arrangement in 1916 displaying the extensive rail networks feeding coal from the collieries to the ships. Source: University of Newcastle.

From the outbreak of hostilities, the wartime restrictions on coal exports had a severe impact on Newcastle. The defence authorities, through the Customs Department, placed restrictions on the export of coal to the west coast of South America where Chili had been Newcastle's best foreign customer. However, the opening of the BHP Steel Works in 1915 increased local coal requirements, which gave some support to the coal industry.

The Port Waratah Coal Stage



Map of Port Waratah showing the multiple rail sidings. Source: University of Newcastle.



The New Compound for Waggon. The new Port Waratah marshalling yard Morandoo sidings completed in 1908. Source: 90 views of Newcastle.

Continued next page...



Constructing Port Waratah Coal Stage in the days of block and tackle. Source: Flickr.



The finished Port Waratah Coal Stage. Source: Flickr.



3090T shunting on the Port Waratah Coal Stage overseeing the residential area. Source: NSWrailrambler.



3246 getting coaled at Port Waratah. Source: NSWrailrambler.



Locomotive 3246 coaling at Port Waratah Coal Stage in the late 1960s. Source: D C Jones.



Replenishing the Port Waratah Coal Stage in the late 1960s. Source: Raymond Marchs.



Loco 5114 with an interesting customised tender arrangement passing Port Waratah Coal Stage. Source: NSW Rail Rambler.



Locomotive 5248 at Port Waratah Coal Stage in 1972 shadowed by a diesel. Source: David Patterson.

Owing to the War and interruption to international shipping and many factors afterwards, it was 1968/69 before the coal tonnage out of Newcastle exceeded the 1913 figure! Still development of Carrington's wharfage and rail facilities proceeded with the Western Basin Wharf, completed in 1915. It was built to last and claimed to be the strongest timber wharf in the world. Work had commenced too on moving away from the Hydraulic Power Station driven propulsion system for cranes as the first of the electric cranes were erected at the new Basin facilities carved out of the mud flats. Ultimately, 24 rail sidings serviced the six cranes as Carrington increasingly became Newcastle's and the nation's coal-loading hub.



'The Dyke' stretching along in the right middle ground with 'The Basin' carved out behind it with ships docked in 1930. Source: Hunter Living Histories.

The constraints of WW1

But all was not good news at Carrington. The Hetton Colliery, which had stretched its tentacles for kilometres under water right out under the Pacific Ocean was shut down permanently. Absence of trade and the heavy expense of maintaining an idle colliery, especially the enormous constant pumping, was the cause. Local mine engineer, Alex Mathieson, who had built the high-tech enterprising mine venture over a period of 30 years, had to painfully supervise its dismantling.



Hauling empty wooden coal hoppers back from Port Waratah on the Main Northern Line. Source: steamtrainstories

Things had got so bad, due to the lack of shipping, that during 1917, Prime Minister, Billy Hughes purchased 100,000 tons of Northern coal to keep the collieries working. The coal was stacked at The Dyke until late 1920, when an order was secured for a supply to New Zealand. By January 1921, about 7,000 tons still remained.



Locomotive 5412 heading to Newcastle Port along Thornton Bank with coal. Source: David Patterson.

Increasing frustration in Newcastle

But funding for Newcastle's port development was limited especially during WW1, and in subsequent years with its war debt coupled with the effects of the Great Depression. Newcastle unsuccessfully competed with the focus on Sydney's infrastructure in the 1920s with the construction of the Harbour Bridge, an underground railway and suburban rail electrification.



Shunting at Port Waratah. Source: NSWrailrambler.

In the 1920s, Novocastrians became frustrated with the NSW Government's failure to upgrade

the Port's facilities. Resentment also continued to simmer, as unsuccessful attempts to gain local control were blamed on determined opposition from bureaucrats who lived and worked in Sydney.

Although the Public Works Department was almost continuously occupied with dredging and reclamation work in Newcastle Harbour, there was much dissatisfaction over the inadequate wharf accommodation and equipment. At least two Sydney firms were prepared to ship wheat through Newcastle in 1922, but their trade was lost because the Government declined to provide the necessary facilities.

The strongest Newcastle attacks were directed at the Railway Commissioners for their failure to improve coal loading facilities, while reaping significant profits from their extensive Newcastle operations.

The divided control which hampered development and decision making in the Port of Newcastle continued, with the NSW Government Railways (NSWGR) gaining complete control of coal handling in 1913 with the takeover of the last privately-owned operation.



Loco 5475 waiting at Port Waratah Loco Depot and Turntable. Source: NSWrailrambler.

In 1921, the Government re-introduced a system of port charges purportedly to raise funds to undertake works in the Harbour. However, while over £10,000 per month was reaped, Newcastle felt ripped off when they did not see corresponding investment in Harbour improvements. The discontent reached the stage where a Royal Commission was launched in 1923 to take an overview of the Port's funding and development. While the Premier supported the formation of a local Harbour Trust, the Railways vigorously resisted as did BHP and the coal mining industry as they thought it would lead to an increase in port charges.



Waiting for work at Port Waratah Locomotive Depot. Source: Hiveminer.

Through the 1920's and 1930s, reclamation of the foreshores continued only steadily as

railways and sheds and loading facilities were added. The Port Authorities tried to diversify from a reliance on coal and in 1928 wool sales began to be conducted in Newcastle with supporting transport and storage infrastructure.



Locos lined up at Port Waratah Depot. Source: Steamtrainstories.



Port Waratah Locomotive Depot. Source: Weston Langford.



Port Waratah Locomotive Depot. Source: steamtrainstories.



Hauling coal hoppers to the Port Waratah BHP Steelworks hub. Source: Flickr.



A 53class locomotive followed by a big Garratt hauling coal from Cessnock to Newcastle. Source: Cessnock Advertiser.

The Great Depression hits Newcastle

During the Great Depression, the 'Newcastle Morning Herald and Miners' Advocate' reported that:

"In none of the suburbs of Newcastle have the effects of the stoppage of production at the large northern collieries been more severely felt than by Carrington. It is entirely dependent on the coal trade for its existence and the Railway Commissioners are the largest ratepayers in the municipality...Coal shipments when conditions are regular, require the services of between 800 and 900 men. About 500 of these are trimmers, another 250 are crane employees... trimmers, instead of having three turns each week, are having one short working period in each fortnight, and only a proportion of the men have even that. The crane men, whose numbers have been reduced to 50, are faring a little better."



Loco 5262 at Tighes Hill in 1972 approaching Port Waratah at Scholey St Junction. Source: David Patterson.



A pair of Beyer Garratts at Port Waratah Locomotive Depot. Source: NSWrailrambler.



A Beyer Garratt fired and ready to haul a heavy load of coal from Port Waratah to feed the big Liddell Power Station. Source: NSWrailrambler.

The Carrington Municipal Council allocated 15 tons of coal for distribution amongst the unemployed. This was aimed at deterring some residents from illegally knocking lumps of coal off the top of wagons on incoming coal trains as the locomotives changed from hauling to shunting. *Continued next page...*

The residents would return frequently to pick up the coal along the tracks and hope that firemen would knock some down for them from passing locomotives although this was severely frowned upon by the struggling Railways.



The Basin with its grain terminal in the modern era and The Dyke on the right side of The Basin at Carrington. Source: Port of Newcastle.

Then in 1936, there was some genuine hope for Carrington to progress again as a major rail and port development hub. This came with the opening of a massive bulk wheat terminal constructed next to the Harbour and served by extended railway facilities at Carrington. It was claimed that the silo complex contained the second highest building in Australia and that the travel of the lift was greater than any other lift in the nation.



Grain train passing through The Dyke coal yard on Carrington in 1947. Source: Newcastle Herald.



Passing of an era - steam locomotives stored at Port Waratah in 1964. Source: D C Jones in NSWrailrambler.

While a number of an administrative changes were made, it was only with an upsurge in overseas trading after World War 2 that the impetus for reforms took hold seeing major advances in loading technology and port management.

'Newcastle and Rail – The Never-Ending Story' will be continued with part 18 of 24, next month...

If you see me talking to myself,
I'm having a staff meeting.

Contributed by Tony Holloway...



Contributed by Augie Gray...

Irish Joke

Six retired Irishmen were playing poker in O'Leary's apartment when Paddy Murphy loses £500 on a single hand, clutches his chest, and drops dead at the table.

Showing respect for their fallen brother, the other five continue playing standing up.

Michael O'Connor looks around and asks, 'Oh, me boys, someone got's to tell Paddy's wife. Who will it be?'

They draw straws. Paul Gallagher picks the short one. They tell him to be discreet, be gentle, don't make a bad situation any worse. 'Discreet??? I'm the most discreet Irishmen you'll ever meet. Discretion is me middle name. Leave it to me.'

Gallagher goes over to Murphy's house and knocks on the door.

Mrs. Murphy answers, and asks him what he wants. Gallagher declares, 'Your husband just lost £500, and is afraid to come home.'

'Tell him to drop dead!', says Murphy's wife... 'I'll go tell him.' says Gallagher.

Book Titles

- "Angry Commuters" by Adelaide Train.
- "Desert Crossing" by I. Rhoda Camel.
- "Dull Pain" by A. King.
- "How to Cook Spaghetti" by Al Dente.
- "How to Get Attention" by A.U. Overthere.
- "How to Write Big Books" by Warren Peace.
- "How I Win Races" by Aaron Quigley.
- "I Lost My Balance" by Eileen Dover and Phil Down.
- "Irish Heart Surgery" by Angie O. Plasty.
- "Italian Musical Instruments" by Amanda Lin.
- "It's A Shocker" by Alec Tricity.
- "I Was A Cloakroom Attendant" by Mahatma Coate.
- "Positive Reinforcement" by Wade Ago.
- "School Truancy" by Marcus Absent.
- "Shhhh" by Danielle Soloud.

Continued next column...

Book Titles – Continued....

- "Singing Without an Orchestra" by A.K. Pella.
- "Songs for Children" by Barbara Blacksheep.
- "Stop Arguing" by Xavier Breath.
- "The Art of Archery" by Beau N. Arrow.
- "The Lion Attacked" by Claude Yarmoff.
- "The Old Codger" by A.T. Yearsold.
- "The Philippine Post Office" by Imelda Letter.
- "Things to Do at a Party" by Bob Frapples.
- "Who Killed Cock Robin" by B.B. Gunn.

Contributed by Ellen Dillon...

(Extract from the London Times)

A Well-Planned Retirement

Outside England's Bristol Zoo there is a parking lot for 150 cars and 8 buses.

For 25 years, its parking fees were managed by a very pleasant attendant; the fees for cars (\$1.40), for buses (about \$7).

Then, one day, after 25 solid years of never missing a day of work, he just didn't show up; so, the Zoo management called the City Council and asked it to send them another parking agent. The Council did some research and replied that the parking lot was the Zoo's own responsibility.

The Zoo advised the Council that the attendant was a city employee.



The City Council responded that the lot attendant had never been on the city payroll. Meanwhile, sitting in his villa somewhere on the coast of Spain, or France, or Italy, is a man who'd apparently had a ticket booth installed completely on his own and then had simply begun to show up every day, commencing to collect and keep the parking fees, estimated at about \$560 per day - for 25 years. Assuming 7 days a week, this amounts to just over \$7 million dollars and no one even knows his name.

Contributed by Doug Walker...

**SO IT TURNS OUT THAT
BEING AN ADULT IS
MOSTLY
JUST GOOGLING
HOW TO DO STUFF.**

Contributed by Augie...

Wives

‘As illustrated by a very brave man!’

After my wife died, I couldn't even look at another woman for 10 years. But now that I'm out of jail, I can honestly say it was worth it.

Got an e-mail today from a "bored housewife 32, looking for some action!" I've sent her my ironing, that'll keep her busy.

The wife's been hinting she wants something black and lacy for her birthday. So, I've got her a pair of football boots.

You will need extra caution while driving over the new year period as a lot of drunk men will get their wives to drive them home.

My wife asked if she could have a little peace and quiet while she cooked the dinner, so I took the batteries out of the smoke alarm.

Did anyone get an owner's manual for a wife? Mine's giving off a terrible whining noise!

My wife apologised for the first time ever today. She said she's sorry she ever married me.

My wife said I needed to be more in touch with my feminine side, so I crashed the car, burnt the dinner and ignored her all day for no reason.

Scientists have discovered a certain food that diminishes a woman's sex drive by 90 percent. It's called a wedding cake.

Things turned really ugly at my house last night. The wife removed her make up.

My wife shouted at me this morning for not opening the car door for her. I would have, but I was too busy trying to swim to the surface.

Contributed by Doug Walker...

We're getting older! Smiles for you....

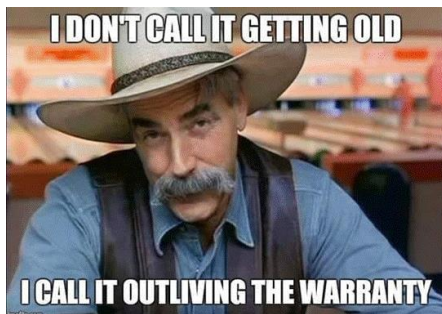


The main function of the little toe on your foot is to make sure that all the furniture in the house is in place.

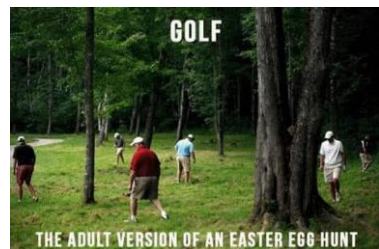
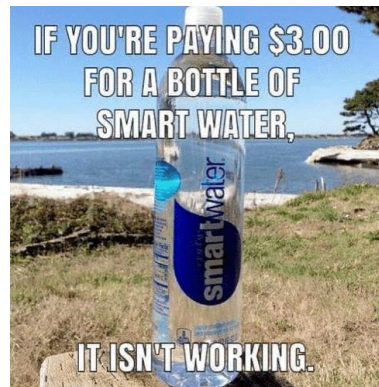
JAPANESE SEX

A Japanese couple is arguing about how to perform highly erotic sex.
 Husband: "Sukitaki. Mojitaka!"
 Wife replies: "Kowanini! Mowi janakpa!"
 Husband says angrily: "Toka a anji rodi rouni yakoo!"
 Wife, on her knees, literally begging: "Mimi Nakoundinda tinkouji!"
 Husband shouts angrily: "Na miaou kina Tim kouji I can't believe you just sat there trying to read this!
 You don't know any Japanese!
 You'll read anything as long as it's about sex....
 Sometimes I worry about you.

"I find, these days, that most of my conversations start out with: Did I tell you this already? or What was I going to say?"



You never appreciate what you have till it's gone. Toilet paper is a good example



Everything will kill you



so choose something fun

The brain is the most outstanding organ. It works for 24 hours, 365 days, right from your birth until you fall in love.

I finally did it!
 Bought a new pair of shoes with memory foam insoles.
 No more forgetting why I walked into the kitchen.

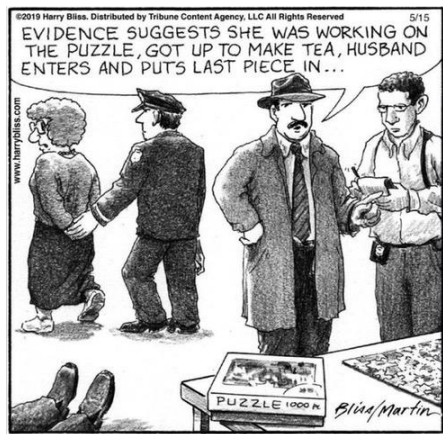


Contributed by Augie...

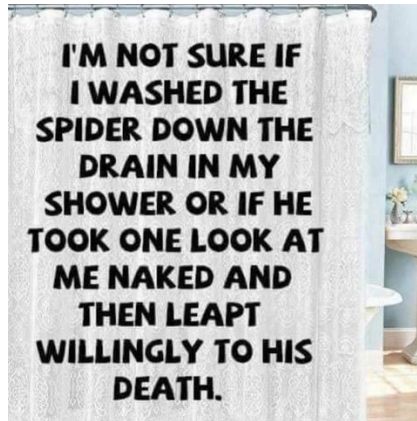
CORONA BEER CHANGES THEIR NAME TO AVOID ASSOCIATION WITH THE CORONA VIRUS OUTBREAK



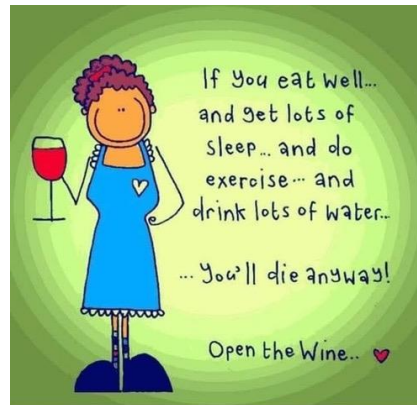
Paddy took 2 stuffed dogs to the Antiques Roadshow....
"Ooh!" Said the presenter, "This is a very rare breed, do you have any idea what they would fetch if they were in good condition?"
"Sticks." replied Paddy.



**THEIR
THERE
THEY'RE**
There is a difference.



Pee on the electric fence they said...
It will be fun they said...



Contributed by Doug Walker...

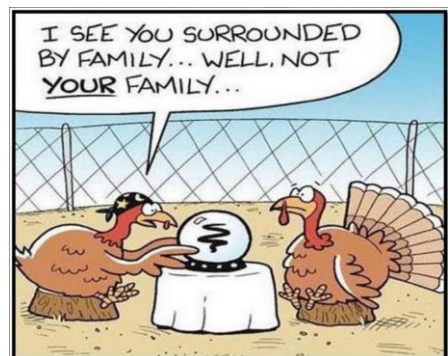


It was a very popular auto then, but I don't think this sign would pass muster today. They were metal with an enamel finish, and on display at garages. We reckon we are liberated today, but this just shows that freedom of speech and humour have been replaced by litigation from princesses both male and female:





Contributed by Allan Rudd...



Contributed by Augie...

A Little Poem For Seniors

Another year has passed
And we're all a little older.
Last summer felt hotter
And winter seems much colder.

There was a time not long ago
When life was quite a blast.
Now I fully understand
About 'Living in the Past'

We used to go to weddings,
Football games and lunches..
Now we go to funeral homes
And after-funeral brunches.

We used to go out dining,
And couldn't get our fill.
Now we ask for doggie bags,
Come home and take a pill.
We used to often travel
To places near and far.
Now we get sore asses
From riding in the car.

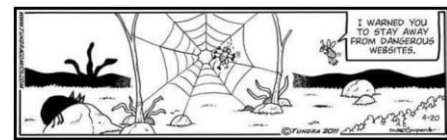
We used to go to nightclubs
And drink a little booze.
Now we stay home at night
And watch the evening news.

That, my friend is how life is,
And now my tale is told.
So, enjoy each day and live it up...
Before you're too damned old!



Just bought a book from IKEA

Apparently, you can't use 'beefstew' as a password. It's not stroganoff.





2020 Palmer Rockarama "Crystal and Craft Fair"

Collier Park, Palmer, South Australia.

**Friday 1st May, Saturday 2nd May
& Sunday 3rd May 2020**

**Also featuring South Australian Metal
Detecting
Championships Sunday 3rd May 2020**

Get more details...

click/tap on the MGMC website link:

<https://www.murraylandsgemandmineralclub.com/>

Gem & Mineral Show and Associated Crafts

By Enfield Gem & Mineral Club

July 2020

Sat 11th 10.00am – 5.00pm

Sunday 12th 10.00am – 4.00pm

Admission

Adult \$5.00

Concession \$4.00

Children under 12 free if accompanied by an adult.

Venue

Enfield Primary School Stadium

Harewood Avenue, Enfield SA

(Off Main North Road)

Demonstrations – Stalls – Refreshments

Canberra Rock Swap Sat 28 - Sun 29 March 2020 at EPIC

The Canberra Lapidary Club's next event will be its outdoor Rock Swap.

When: Saturday 28 - Sunday 29 March from 8.30am to 5.00pm.

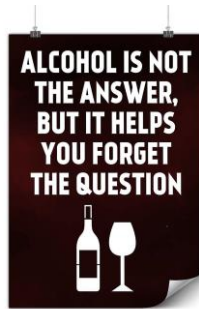
Location: Wagtail Way, EPIC (Exhibition Park off the Federal Highway), Canberra.

Entry is free!

Dealers and fossickers will be there selling jewellery, gemstones, fossils, rocks, mineral specimens and lapidary supplies.

It will be a fun weekend filled with activities for the whole family - lucky dips, sapphire sieving, gold panning, sausage sizzle and much more

For further information contact the Club's Show Convener, Norm Menadue on (02) 6258 6631.



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3.5 x 3.3cm.....(\$1.50) \$12.00

4 x 4cm.....(\$1.50) \$13.00

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6.2 x 7.5cm.....(\$2.50) \$18.00

7 x 7cm.....(\$2.50) \$19.00

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8.5 x 9.5cm.....(\$3.00) \$22.00

9.5 x 9.5cm.....(\$3.50) \$23.00

13 x 9.5cm.....(\$4.00) \$25.00

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Flats sizes

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398 x 290 x 98mm\$4.00

Greg Vort-Ronald

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all boxes and flats are folded together, no staples required

(Prices subject to change)



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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...](#)

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...](#)

Gemcuts: [Click here...](#)

Lapidary World: [Click here...](#)

Metal Detectors - Garrett Australia: [Click here...](#)

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