

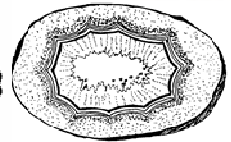
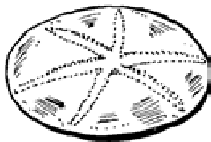
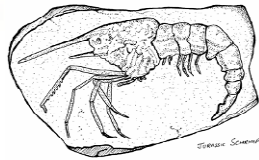
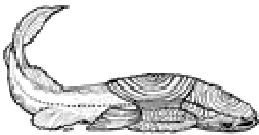
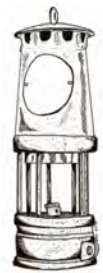


GEMBOREE 2017

INFORMATION E-NEWSLETTER

September 2016 – Edition 6

Tony Luchetti Showground, Lithgow – Easter – 14th – 17th April, 2017



FROM THE E-NEWSLETTER EDITOR

Welcome to our sixth e-newsletter so far as we head towards the 53rd National Gem & Mineral Show which is being held at the Tony Luchetti Showground, George Coates Avenue, Lithgow in New South Wales from Friday 14th to Monday 17th April, 2017.

The registrations for the GEMBOREE 2017 are increasing each month so don't put things off when it comes to registration, especially if you wish to camp or be accommodated on the showground.

Those coming to Lithgow next year will certainly be in for a treat with all the extra activities and socialising planned. As usual the event is staged by the Gem & Lapidary Council of N.S.W. Inc. under the auspices of the Australian Federation of Lapidary & Allied Crafts Association Inc. Meetings have been held almost every month to make sure everything runs smoothly and ensure a successful event.



Should you need other accommodation, local tourist information or have a question or two, you can contact the great staff at the Lithgow Visitor Information

Centre, 1137 Great Western Hwy, Lithgow. NSW 2790 or telephone 1300760276 or email tourism@lithgow.com or www.tourism.lithgow.com

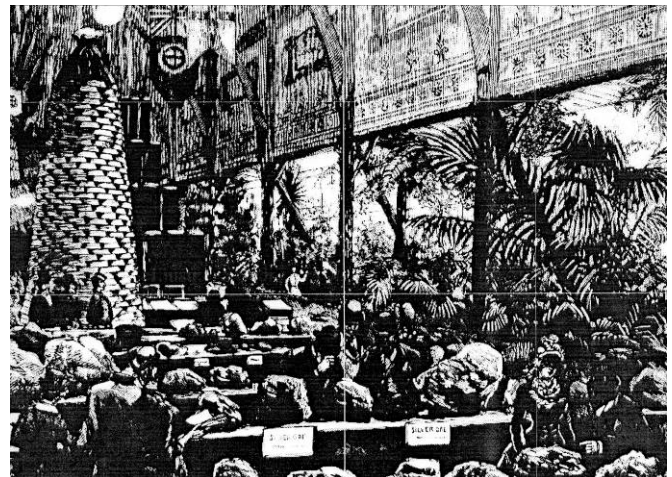
It will be great to meet people in person and I hope you all make the effort in less than a year's time to visit Lithgow in the Central Tablelands of New South Wales and its picturesque environment.

Alan McRae, FAIHA – GEMBOREE 2017
e-newsletter Editor and Publicity Officer

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LAPIDARY – A SATISFYING HOBBY

Skilled artisans of old, fashioned the jewels in the crowns of Kings and Queens, some of which were exhibited at the Sydney International Exhibition in 1862 and 1879, below.



Today, professional lapidaries supply the jewellery trade with the gems we all purchase in rings, brooches and pendants, etc. But, there are thousands of people Australia wide who have learned the artistic skills of gem cutting and jewellery making – as a hobby - a hobby which is one of the most personally satisfying you can have. You can learn to create your own gemstones and jewellery at your own pace, in a social setting of a friendly group of people, who share the same fascination with gemstone artistry - this is where your local Lapidary Club comes in.

CROCOITE

For those collectors who like crystals few can go past having a piece of impressive red crocoite in their collection.

Did you know that Crocoite (lead chromate $PbCrO_4$) is Tasmania's mineral emblem though if one asks a Tasmanian what it actually looks like or does it have crystals you will normally get a blank look. For those non-collectors the word is pronounced cro-co-ite. The mineral was declared the states mineral emblem in 2000, thus – ***I, THE HONOURABLE SIR GUY STEPHEN MONTAGUE GREEN, Companion of the Order of Australia, Knight Commander of the Most Excellent Order of the British Empire, Commander of the Royal Victorian Order, Governor in and over the State of Tasmania and its Dependencies in the Commonwealth of Australia, in exercise of the Royal Prerogative, and acting with the advice of the Executive Council, do by this my Proclamation, declare that the mineral lead chromate - $PbCrO_4$ known as CROCOITE be adopted as the Mineral Emblem of the State of Tasmania.***

GIVEN under my hand and the Seal of the State of Tasmania at Hobart this fourth day of December, Two thousand.

G.S.M. GREEN, Governor

The name crocoite is from the Greek word 'krokos' which basically means 'crocus' or 'saffron.'

One has to be careful when handling crocoite, also known as 'red lead', as it is quite a fragile mineral having a hardness of 2.5 – 3. One should be aware when handling specimens that crocoite is composed of lead chromate so it is toxic but it is not radioactive.

It is also one that fascinates mineral collectors world-wide. Crystals are translucent to transparent with specimens of an usually beautiful deep orange-red colour and Tasmania can boast the largest, most abundant and definitely the best quality specimens that are today seeking to command increased prices. Some specimens can be found in a yellowish colour.

After the cessation of convicts era a number of mining projects took place, primarily on the west coast of Tasmania with discoveries of copper, tin, silver, lead and importantly gold. Large scale mining projects took place in towns such as Zeehan, Waratah, Queenstown

and Rosebery with the effect of the mining very evident in some places even today. The discovery of significant silver-lead deposits during 1882 saw the town of Zeehan formed which over time had a population of some 10,000.

Whilst not common to find, the first crocoite specimens in the world were found near Beresov in the Ural Mountains in Russia in 1763. Then once disclosed to the public some other small crystal finds were made elsewhere in Europe. Since then a number of other locations have yielded these spiky red formations including - Rhodesia, South Africa, Romania, Brazil, Germany, Philippines, Mashonaland and in the United States of America in Arizona and California.

Later came the substantial amounts of excellent crocoite from near Dundas in Tasmania. Immediately the finds attracted the interest of mineral specimen collectors world-wide with these larger, richly coloured, well-formed brilliant translucent crystal formations and in abundance, especially when compared to earlier locations. Even today the mine is worked for specimen production.

There are two crocoite mines of note, the Adelaide Mine and the Red Lead Mine at Dundas in Tasmania where these impressive crystal formations seem to be found in relative abundance. Brilliantly coloured crystals, some up to 10 cm or longer, can be found growing in wall cavities. Crocoite is now rarely seen from the Heazlewood and Whyte River areas.

Large quantities of crocoite and cerussite was mined at the Adelaide Mine to provide it as a flux in the Zeehan smelter in the early 1900s. One has to wonder how



many tons of these fascinating crystals ended up in the mix. This mine was initially created to mine galena and silver however like many early mines water seepage became a real problem and the cost to pump it out became too costly during World War One. Also as the miners went deeper the metal substance of the ores gradually lessened. It was later owned by Frank Mihajilowitz in the 1970s

who mined it for specimens to sell to museums, dealers and collectors. The mine is remote and located in a rainforest within a hillside and was taken over by new owners in July 2004.

Some of the associated minerals can include cerussite, vanadinite, wulfenite, pyromorphite and limonite.

Large specimens of these brilliant, high lustre and red needle-like crystals can be found up to 18cm long, depending from which mine, in private collections and museums though nowadays specimens are smaller in length. The elongated and prismatic crystals are almost always vertically striated though unfortunately in many cases they are poorly terminated. Single crystals are very uncommon and are not large. Most specimens are found covered in thick brownish mud called gossan. Some of the crystal specimens have been found partly hollow. At least one specimen of crocoite is present in most serious mineral collector's collections.



After crocoite was first discovered in Russia it was well over a century later before crocoite was first observed in Tasmania at the Heazlewood silver-lead mine in 1895. This mine was associated with men such as James Smith and W.R. Bell.

The mineral was also discovered at Whyte River, Magnet, and at Dundas a short time later leading to many mining jobs for the island state. The remote Whyte River area proved to be a gold bearing area which saw a boon in the mid 1870s to the early 1880s and after some large nuggets were found it brought prospectors from other Tasmanian goldfields.

It is interesting to note that chromium oxide was discovered in 1797 by Louis-Nicholas Vauquelin. A year later he concocted the metal itself by powdering crocoite crystals and precipitating the lead out via its reaction with hydrochloric acid.

COAL MINING IN LITHGOW

Mining has been part of Lithgow's history from the earliest times. Many people are mindful of the mining of coal and shale but there was also gold, silver, copper and zinc mining.


The first Europeans in the early 1800s who traversed the Lithgow Valley were aware of the dark coal seams at the bottom of the valley walls. The combustible coal is composed mainly of carbon, hydrogen and oxygen, with reduced amounts of nitrogen and sulphur along with some water.

Coal is basically formed from accumulated plant and vegetable matter which over millions of years is changed by decay and then effected by varying amounts of pressure and heat. Known as coalification this gradual alteration to coal is usually interlayered with sedimentary rocks. Some coal deposits can be dated from the Carboniferous Age some 350 to 250 million years ago. Many coalfields date from the Permian age around 250 million years ago.



Above, black coal can have a bright, shiny lustre to being quite dull. It can also be relatively hard to quite soft. Black coal's major use is for generating electricity in power stations. It is also suitable for the production of coke.

Andrew Brown, one of the first Lithgow pioneers appears to be the first to use coal in 1838 when he wrote in his diary "getting coal". He was using it domestically as well as to burn limestone to make lime to use in his building. As steam boilers were later installed here and there, coal could be used to fire them.



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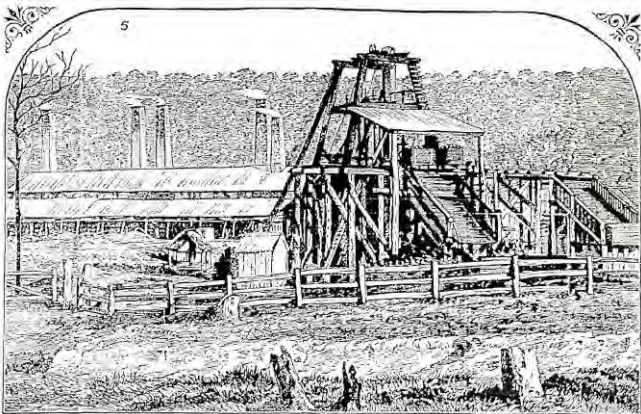
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each.**

It took the Great Western Railway to finally arrive in Lithgow in 1869 before large scale commercial mining was able to begin. From this time there have been some seventeen collieries that have been operated in the Lithgow Valley, all being underground mines and part of the seams of good steam coal on the Western Coalfields.

It was found that the Western Coalfield encompasses quite a distance running in a north-westerly direction. It basically begins at Katoomba, over through Hartley, then Lithgow roughly in the centre and the most substantial. Then it goes on to Cullen Bullen and Kandos then across to Ulan out of Mudgee.

Reverend Colin Stewart, a Scotsman and Presbyterian Minister from Edinburgh, had the Hermitage Colliery on his Hermitage Estate. It was 130 acres next to Andrew Brown. Mr. Poole worked the mine and in 1868 they began selling their coal to the local railway workmen in their tents and for other domestic purposes.

Coal mining soon became reasonably profitable as each mine established could now transport their coal to market. Like Britain the price of coal fluctuated, so when the coal price was down miners were paid less.



Possibly the colony's steam trains and the Great Western Railway may not have been initially viable if Lithgow's coal was not available in copious quantities. By 1872 Thomas Brown's Eskbank Colliery (above) produced over 4,320 tons of coal annually. In 1873 the Eskbank Colliery and the new Hermitage Colliery were the only establishments offering coal for sale in the valley.

The Lithgow Valley Colliery was soon to be created and opened its coal mine in 1873, and became incorporated in 1877. Around the same time Thomas Saywell, an Englishman and owner of Saywell's Tobacco Co. Ltd in Sydney established his Vale of Clwydd Colliery. After selling his tobacco interests he invested in real estate and coal mines. He also became the owner of the Great Western Zig-Zag colliery at Lithgow and was a big shareholder in copper mines at Cobar.

In mid 1883 Messers. W. Wilson and Thomas Saywell

announced that they were planning to sink for coal upon a portion of the estate of the late Mr. Thomas S Mort. The land upon which it was determined to establish colliery comprised an area of about 400 to 500 acres, situated about a mile to the north of the Vale of Clwydd Colliery (photo below – Lithgow Library) and about a mile and a quarter to the east of Brown's (then Rutherford's) Colliery.



The mine of the Great Western Zigzag Company was sunk about two chains from Farmer's Creek. Messrs Wilson and Saywell agreed to pay a royalty of sixpence per ton on all coal raised. The poppet heads were 50 foot in height with an excavation made to give room for engine and boiler houses. The shaft was put down on the north eastern dip of the Vale of Clydd seam. Blue shale was passed through along with about 80 feet of sandstone, giving the mine a good strata roof.

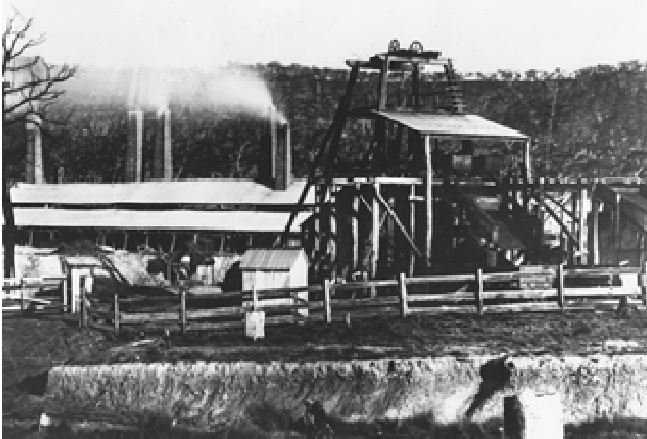
The seam of coal was about 12 feet 6 inches in thickness, at a total depth of about 197 feet from the pit mouth. The total depth of the shaft, including that of the seam of coal, was about 207 feet. Eighteen men were employed breaking way from the faces of the seam and open it up.

The machinery erected consisted of a 40 horse power horizontal engine by the Scotch firm of Cochrane which, for some time to come, would work both the pumping and winding gear. There were two pumps, one being a beam pump working from the bottom, and the other a Blake's pump working from a depth of 110 feet. The two together raised about 600 to 700 gallons an hour.

The engine room was lofty, well-built weatherboard structure on a stone foundation. The drum was 6 feet 6 inches in diameter, and the winding gear was worked on the friction principle. The coal on being raised to the pit mouth platform was discharged from the skips into two kick-ups, which working automatically threw the coal upon two screens, whence it fell into the trucks drawn upon the siding and were then conveyed to the railway line, to be taken into Sydney.

On Saturday 1st December, 1883, a ceremony to declare the colliery open and to raise the first skip of

coal was performed. A number of invitations had been issued, and much interest was felt in Lithgow on the occasion. Some 400 people dined on beer, bread and roast beef whilst the Lithgow Imperial Band played a number of selections excellently well during the day. At about half past 2 o'clock the ceremony of opening the mine was performed by Mrs. Targett, wife of the member of the Lithgow district. A bottle of champagne having been suspended in the engine room, was dashed against the fly wheel and the lady named the mine the Great Western Zigzag Company and declared it to be open.



Eskbank Colliery above – from Lithgow Library

More mines were opened such as (in no particular order) the Oakey Park Colliery Co. which operated between 1888 and 1941. Other mines mentioned in the district whilst doing some research included South Bowenfels Colliery, Airly Mine, Fairview Colliery, Ivanhoe North, Angus Place Colliery, Charbon Colliery, Donnybrook Colliery, Steelworks Colliery, Centennial, Cullen Valley Mine, Invincible Colliery, Lambert's Gully Mine, Great Cobar mine, Baal Bone Colliery, Pine Dale Mine, Springvale Colliery, Newcom Colliery and the State Coal Mine opened by the New South Wales Railways in 1920.



Above - Mine props and coal loading facilities at Lithgow.

Coal miners became very unionised to protect their perilous jobs. Newspaper stories such as the one on 13th October, 1923, recorded "LITHGOW MINERS.

A mass meeting of miners was held in the Lithgow Oddfellows' Hall to discuss the dismissal of two employees at Tankersey colliery. The executive officers were authorised to take action in the matter."

Another mine related item appeared on 10th March, 1953, "MINES TO CLOSE - Western Coal Not Needed. Four mines on the Western coalfield will close down because the Victorian Railways have notified the Joint Coal Board that they do not require any more Western Districts' coal. Dismissal notices have gone out to over 200 miners at three underground collieries, Renown Extended, Wattle Mount and Donnybrook and at the open-cut mine, Western Main. The chairman of the Joint Coal Board, Mr. S. F. Cochran, conferred with Western District miners' leaders at Lithgow on Saturday. It is understood that he told them work would be found for the displaced men on the Southern coalfield. The chairman of the N.S.W. Combined Colliery Proprietors' Association, Mr. E. E. Warren, said last night that reports of unemployment on the N.S.W. coalfields, especially in the west, were grossly exaggerated and were being circulated for propaganda purposes. The position, so far as underground mines are concerned, is that only uneconomic small mines, producing coal of a type for which there is at present no market, are being closed down."

Initially Lithgow coal miners used "greasy or coffeepot" lamps but these were replaced with the miner's safety lamp (right) used up until acetylene and electric lamps were issued.

Local coal mining has not been without its disasters around Lithgow. One in particular was a double disaster, the two accidents being just a few months apart in 1886. They occurred at the Lithgow Valley Colliery and resulted in the death of eight miners in total.

Their first accident took place on 13th and 14th February, 1886, and was the result of an underground fire and explosion which had three fatalities, the men being found suffocated. An underground steam engine was used to ventilate the mine and the miners departing at the conclusion of their shift did report excess smoke.

Then about nine weeks later the second incident took place on 19th April in which a five man investigating party lost their lives. On this occasion it was attributed to a 'wind blast'. The disasters were the most serious mining accidents ever experienced in the Western Coalfield of New South Wales. (More details will appear in a later issue of the e-newsletter.)

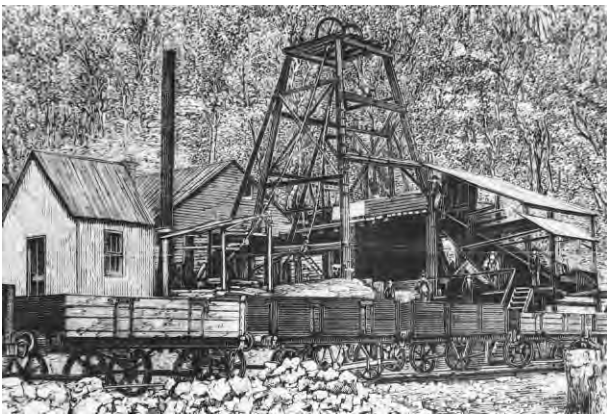


The local newspaper often contained various figures on the local coal industry such as the following in April 1898. "The Lithgow Mercury received from the Under-Secretary for Mines a copy of the Chief inspector's report "on the inspection of mines under the Coal Mines Regulation Act for the year ending 31st December, 1897. The quantity of coal wrought during the year was 4,383,591 tons, being an increase of 474,076 tons as compared with 1896. The figures for the Western district are: - 1896 - 278,124 tons and in 1897 - 287,800 tons, an increase of 9,736 tons.

The shale produced during 1897 amounted to 34,090 tons. The bulk of this came from the Western district, the figures for which compare as follows: - 1896 - 28,844 tons and in 1897 - 28,604 tons – a decrease of 240.

The total number of persons employed in 15 coal and shale mines in the western district was: - Below ground, 344, above ground, 69, a total of 413. The total for the colony was 9,979, as compared with 9,460 in 1896, thereby showing a satisfactory increase. The value of the two minerals produced in the colony was: - 1896 - £1,159,452 0s 0d and in 1897 - £1,270,652 16s 1d.

The quantity of coal and shale raised per person employed was, in the Western district: - Coal, 697 tons and shale 110 tons. Last year there were 10 fatal accidents in coal and shale mines. In the Western district there was only one fatal and one non-fatal accident."



The methods of coal mining vary from region to region though essentially there are three types in use around Lithgow. For more than 150 years methods and practices changed but it has been changes in technology that has allowed the industry to move forward since the Vale of Clwydd Mine (above – from Lithgow Library) was opened.

In the early days all work was done by hand with miners going down the mine often on a ladder and using some type of open flame lamp to illuminate a small area in front of their face. It was continuous hard labour, a bit like solitary confinement one assumes for many, in the dark mines with their low ceilings. Then picks, hammers and shovels were used

to obtain the carbonaceous fossil fuel known as coal. Black powder explosives were initially in use. Barrows, small wooden wagons on rails or towed by pit-ponies were then used to remove the coal from the coal face and move it to an area where it could be brought to the surface.

Timber pit props were used to hold up the mine's roof and these were usually supplied by contractors who would deliver them to the mine on horse-drawn or bullock-drawn waggons (below).



Some of the early Scottish miners would refer to the rich coal veins as "black gold". Ventilation was usually very poor allowing volatile and combustible coal dust and methane gas to inevitably float throughout the coal mine where even the smallest spark or ignition flame could cause an immense explosion and loss of life. Accidents were also too frequent.

Working in any mine is dusty and dirty work however coal is one of the worst. Coal miners were susceptible to what they called 'black lung disease' or 'black lung' which they invariably contracted due to their long exposure to coal dust.

The 'bord and pillar' or 'room and pillar' is an underground and old practiced mining method that allows the coal to be partially extracted. This procedure sees the miners make a honey-comb effect within the coal seam. Roadways are made in the coal called 'bords', basically a 'road' to remove the coal. Sections of coal are left to support the roof, these are called 'pillars', the work being carried out by a mechanical continuous miner.

Longwall mining is a similar method except that the roof is supported by hydraulic machinery which after mining a section, is removed allowing the roof to cave in. This complete extraction technique became prominent during the 1980's so now the longwall retreat system is the most popular method.

Two corridors, called roadways, of a planned length, say 1.8km, are hollowed out between 150 and 400 metres apart. These are joined creating one very large rectangular longwall block that can be mined sometimes over a year. All coal is removed making the result some 60% more than the bord and pillar method. The final method is open-cut coal mining where the coal seam is close to the surface. It involves the removal of all vegetation and overburden with soil and rock taken off and put in piles around the open-cut.

CADET AND MILITIA GUARD ON THE SMALL ARMS FACTORY IN LITHGOW

Our nation's involvement in the First World War commenced when Great Britain and Germany went to war on 4th August, 1914. Both Australia's Prime Minister, Joseph Cook (originally from Lithgow), and the Opposition Leader, Andrew Fisher, pledged full support for Britain. The two men were in the midst of an election campaign at the time. This war was to change the lives of many volunteers and their families. The news of the outbreak of war was initially greeted in Australia with great enthusiasm.

Lithgow at the time had the Small Arms Factory producing the Lee Enfield No 1 Mk III - bolt-action, short magazine-fed, rifle.303. The Small Arms Factory had embarked on the production of SMLE rifles in 1912 however their production facilities were unable to manufacture the wartime quantities of rifles and bayonets required until late 1915. Lithgow rifles finally reached Australian forces in quantity in 1916.

with enthusiastic youngsters and older men. A group of Bathurst volunteer cadets can be seen below.

Two volunteers known from Bathurst were Militia 'Sergeant of the Cooks' Herbert Sydney Young, seen in the photo bottom left. Herb was sent as a cook and guard on the Hawkesbury River Bridge and later in a similar capacity at the Small Arms Factory in Lithgow. The other volunteer was Arthur Oliver Saunders, a school cadet and the son of Mrs. R. Saunders of Kelso.

Young Arthur Saunders was keen to join up but he was still far too young. On leaving school he worked for Mockler Brothers in Bathurst becoming a ledger-keeper at the firm. He was finally able to enlist on 16th May, 1915, aged 19, and listed his grandmother, Mrs. E. Brown, of Glebe Lane, Kelso, as his next of kin. His height was 5 foot 5 inches and he weighed 148 lb during his medical. He left Australia by ship bound for Egypt as part of the 2nd Reinforcements for 20th Infantry Battalion, 5th Brigade with the most basic of training.



Military authorities were not concerned about the Germans invading Australia but that some German sympathiser or saboteur may blow up a railway bridge to disrupt troop and supply movements. It was a similar thought with the Small Arms Factory at Lithgow as it was supplying the standard infantry issue .303 rifles.



Military authorities ordered both Lithgow and Central West region cadets and militia to provide a guard and so volunteers were sought, the places quickly filled



Photo - Arthur Saunders (third from left) on piquet duty at Lithgow's Small Arms Factory in early 1915.

From Alexandria in Egypt he was sent on to join the Mediterranean Expeditionary Force on 3rd August to Gallipoli where he was later diagnosed with dysentery. He is sent to Mudros where he recovers and is taken back on strength with the 20th Battalion at Moascar on 7th March, 1916, before proceeding from Alexandria to join the British Expeditionary Force on 18th March, disembarking on 25th March at Marseilles in France.

Arthur had enlisted as a private but quickly gained his stripes being appointed Lance Corporal on 9th August, 1916, Corporal on 12th November, 1916, Lance Sergeant 17th January, 1917 and Sergeant on 6th March, 1917.

Sergeant Saunders was later wounded and killed at Menin Road in Flanders in Belgium on 9th October, 1917 – aged 20 years, nine months. Up to this time he had been wounded twice and been awarded the Military Medal. His Grandmother was informed of the award *“His Majesty, the King, has been graciously pleased to Award the Military Medal for Bravery in the Field to the undermentioned Non-Commissioned Officer – No 1808, Sergeant Arthur Oliver Saunders.”*

As the war went on, the names of volunteers from Lithgow began to appear in the local newspapers. Such as on 17th April, 1915, France – Small Arms Worker – KIA - A local resident has received information from a friend at the front that Sergeant Ford has been killed in action in France. The deceased was until war broke out employed in the Small Arms Factory. For a month he acted as sergeant at guard outside the factory and then when reservists were called up he left to rejoin his regiment - the Gordon Highlanders. He fought with his regiment during the South African Boer War campaign and received a wound in the head. He was one of the first in Lithgow to volunteer, and is the first Lithgow man to fall in defence of his country.

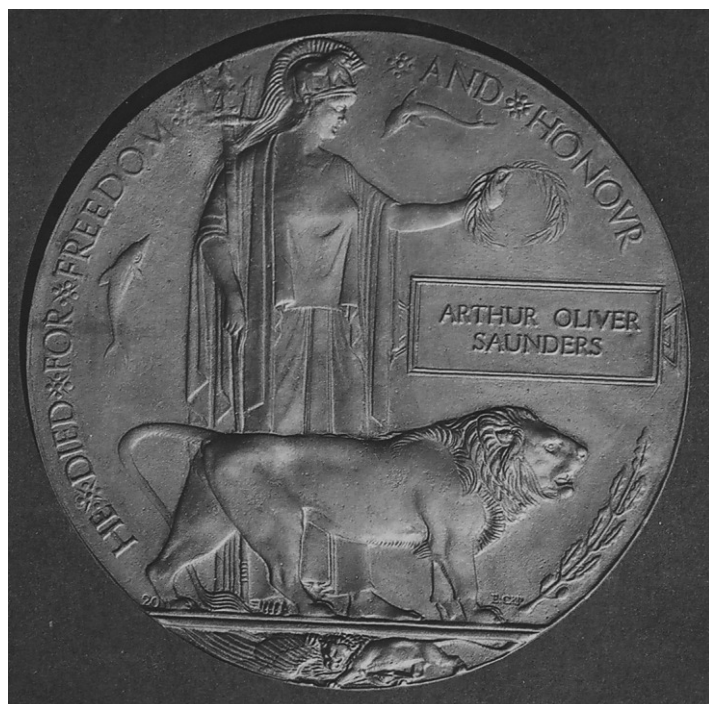
On 9th November, 1915, Major Helsham, of the Australian Medical Corp, who went on service with the first Australian expedition and who has been invalided home, is now en route to Australia. On the same day Mrs. A. E. Stephenson, of the Vale of Clwydd, received a telegram from Colonel Luscombe informing her that Private N. Stephenson, 13th Battalion, has been officially reported missing and wounded on 29th April.

Another report appears on 22nd May, 1917, KILLED. Private Harry Bolt has been killed. He was the brother of Mr. Wally Bolt, of Lithgow, and a plumber in that town until he enlisted two years ago. He was 35 years of age. He had previously been wounded in the thigh whilst carrying out duties as a stretcher-bearer, but on Wednesday last week word was received that he had gone back to the front.

Lithgowites followed The Great War news to try to keep up with what was happening both on the Western Front and the Middle East in Egypt and Palestine.

Another news item on 10th June, 1918, stated that Mr. Thos. Eady of Tank Street, Lithgow, has received news that his son, Private J. Eady, had been-killed. Two brothers are in the firing line.

By the end of the war death was commonplace with families at home dreading that telegram or knock at the door to be greeted by a policeman or local minister. Sometimes an unfortunate family saw the name of a beloved listed in the death lists in the newspaper before they were officially told - and these lists were long after some campaigns. Most of those who died were buried locally near where they met their death.



Families had little recognition that their loved ones had paid the ultimate sacrifice. There were calls for some type of medallion with a number of ideas put forward quite early in the war. Finally on 27th March, 1920, His Majesty, the King, approved the issue of a Memorial Plaque and Scroll to the next-of-kin for all Australian soldiers whose deaths were attributable to the First World War “as a solace for bereavement and as a memento”. They were often referred to as a death plaque or a ‘dead man’s penny’. **Arthur Saunders’ plaque is seen above.** The plaques had originally been conceived mid-way through The Great War and are not uniquely Australian, in fact, they were designed and produced in Britain for issue to all those killed or died from wounds received within the British Commonwealth.

It is of interest to note that Joseph Cook, former Lithgow resident and ex Australian Prime Minister represented Australia, along with nearly 30 other nations, attended the Paris Peace Conference convened in January 1919 at Versailles, just outside Paris. The conference was called to establish the terms of the peace after World War I.

AMETHYST – THE PURPLE CRYSTALS



Amethyst must be almost the best-known gemstone and mineral and would be represented in most collections of people who will be travelling to Lithgow for the GEMBOREE 2017, 53rd National Gem & Mineral Show which is being held at the Tony Luchetti Showground in Lithgow in New South Wales from Friday 14th to Monday 17th April, 2017.

Amethyst is the mauve, purple or violet variety of the mineral quartz, which is one of the most common of minerals on earth. It is usually transparent or translucent. Once thought to be scarce it was quite valuable, being valued equally with four other gems including the diamond, ruby, sapphire and emerald, all once known as the Cardinal gems. However after it was found in abundance in some countries, particularly Brazil, in the 19th century, its price and rarity dropped dramatically.

One has to wonder if we had to name many of the minerals today if we would end up with some interesting insights into early history. Amethyst derives its name from the Ancient Greek “amethystos”, which means “not drunken”, due to the Greeks and other’s belief that it would ward off drunkenness. Greeks believed that by wearing a piece of amethyst stone they would have protection from the after effects of over-indulgence. Also by similar logic, if a person drank from a cup or goblet made entirely of amethyst, or decorated from the then precious stone, he or she would not get drunk at all.

Amethyst’s beautiful purple colour was noticed tens of thousands of years ago which has allowed it to accomplish a distinguished place among gemstones. Amethyst’s familiar purple colouring is usually caused

by local irradiation, impurities of iron or manganese compounds and impurities of trace elements. Its colour can vary from light to dark purple and sometimes it can be banded with purplish and whitish lines. Examples exist where the purple is mixed with the orangey-yellow citrine. The Smithsonian Museum has found that some amethyst specimens from particular locations can gradually fade upon protracted exposure to light.

Amethyst crystals from nearly all districts appear irregularly distributed in individual crystals. Some specimens have been found in the Central West of New South Wales with purple on top and are clear on the bottom.

Amethyst gained status when it was used in the Christian Church for Bishops’ rings which is why it is also known as ‘Bishop stone.’ The royal purple colour was to symbolise Christ. During the Renaissance era signet rings and seals were finely carved from selected pieces of amethyst.

The Romans and the Egyptians also thought amethyst was a scarce gem, which at the time one would have to say was correct. The Roman Emperors and rich merchants would have carvings made in amethyst. A magnificent intaglio portrait of Caracalla, the fashionable name of Marcus Aurelius Severus Antoninus Augustus, the Roman emperor from 198–217 AD, was engraved out of a piece of amethyst.



Julius Caesar who invaded Britain twice, in 55 and 54 B.C., brought back some large amethyst crystals from his trip. Some Roman soldiers believed that if they wore a piece of amethyst into battle it would protect them from getting wounded during the skirmish, as well as assisting the warriors to a great victory. Some Chinese believe that amethyst can enhance their material wealth.

From the emperors, down through the nobles to the upper classes, amethyst jewellery was prized by the Aztecs in South America for centuries. The jewellery made by the Aztecs would incorporate semi-precious and precious stones, so they laboriously hand polished amethyst, moonstone, turquoise and opal. Craftsmen

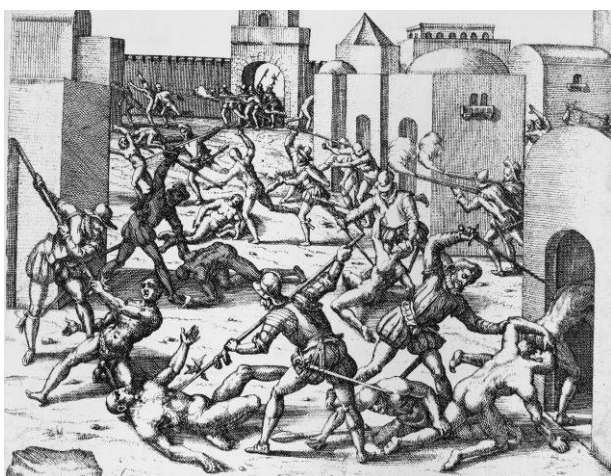
with great patience and skill would use stone hammers and chisels, along with fine grit to slowly polish the pieces of stone. Any holes that were required were put in using a simple twine operated hand drill.

Large amounts of gold and silver were used along with, and to a lesser extent, copper. The use of silver was popular as it was found in abundance in their part of the world. It would be meticulously hammered by hand into a predetermined shape or into sheets. Other



items were also incorporated into their designs such as quartz, obsidian, timber, conch and other seashells such as tusk shells, pearls (left), feathers, especially from macaws, and clay ornaments.

The need for the ornamental and decorative requirements such as necklaces, pendants, earrings, earplugs and ornaments, created a workforce of craftsmen who worked full-time with some Aztec craftsmen concentrating as gold workers, whilst others worked the precious stones such as amethyst. The more elaborate items would be kept for special religious occasions. Many Aztecs wore ear plugs, they were given to young males during their initiation, but they were also worn by women. These required decorations on them. The men actually wore the most jewellery as they had ornaments on their noses. Small ornaments were cast by the lost wax method to adorn various pieces of Aztec jewellery. Small bells had a religious significance as did some birds and reptiles. Unfortunately not a great deal is evident today as the Spanish conquest saw to it that much was destroyed or melted down.



The Incas also prized purple amethyst, however they had to trade theirs from Ecuador from which they created decorative and religious ritual jewellery though it would be taken off them (above) by the Spanish conquistadors in the name of Spain. With the trade routes and the mines dominated by the upper class these men selected the premium pieces. Some of the

pieces that have survived from this culture have been found in graves and tombs with amethyst and gold necklaces found in particular.



Left - Some countries such as Kenya has featured a cluster of amethyst crystals on their one shilling postage stamp.

The Tibetan people for centuries have deemed amethyst as sacrosanct to their Buddha which is why they have had craftsmen create prayer beads from amethyst.

During the Middle Ages, the clergymen of the Catholic Church wore amethyst to decorate the crosses they displayed to show their devoutness and celibacy. English Royals also used amethyst to adorn their regalia as a sign of royalty.

Generally the richer the colour the more expensive and substantially esteemed amethyst has become. This importance has come about from the resplendent collections of jewellery made from amethyst for the Russian Royal families in the 1700s and 1800s using amethyst mined in Russia's Ural Mountains. The families had access to the best hand-picked specimens. Being the birthstone for February amethyst is always on display at jewellers and gem shows.



Amethyst has a hardness of 7 however don't drop it as you will find they are quite brittle and you can wreck the specimen. They boast a hexagonal crystal system with many found in clusters on a matrix base. Primarily found as small stumpy pyramidal crystals or as druse crystal aggregates they can be found outlining the cavities within smaller geodes. Other large geodes found within volcanic rocks are found to contain the purple crystals, especially in countries such as Uruguay and Brazil.

Amethyst is found in Russia, South Korea, Brazil, Zambia, Uruguay, Canada, United States, India and Austria and Australia.

BICYCLES IN LITHGOW

Few people realise these days the impact the bicycle made on the lives of people well over a century ago. From the penny farthing (below) to the specialist racing bicycle. The idea caught on very quickly, not just for boys and men but women and girls too, though the latter were initially frowned upon.



When a story appeared in *The Sydney Mail* in June, 1897, which had previously appeared in the *British Medical and Surgical Journal* it would have certainly stirred up some comments.

The Bicycle and Tuberculosis in Women.

At the last quarterly meeting of the American Statistical Association, Dr. S. W. Abbott, secretary of the Massachusetts Board of Health, presented some interesting figures regarding the proportion of pulmonary tuberculosis in females to that in males in Massachusetts. The rate in 1851 was 1451 females to 1000 males; in 1890, 1055 females to 1000 males; and last year only 974 females to 1000 males. Last year was the first in the history of the State in which the number of deaths from phthisis in females was smaller than that in males. The fact that a uniform reduction in the rate of female deaths began some five years ago, about the time when women were beginning to ride the bicycle extensively, Dr. Abbott considers significant, and he is inclined to attribute the decrease in the death rate to the great increase in open air exercise among women which has been inaugurated by the use of the bicycle.—*British Medical and Surgical Journal*.

It went on to say, "The Bicycle and Tuberculosis in Women. At the last quarterly meeting of the American Statistical Association, Dr. S. W. Abbott, Secretary of the Massachusetts Board of Health, presented some interesting figures regarding the proportion of pulmonary tuberculosis in females to that in males in Massachusetts. The rate in 1851 was 1451 females to 1000 males, in 1890, 1055 females to 1000 males and last year only 974 females to 1000 males. Last year was the first in the history of the State in which the number of deaths from phthisis in females was smaller than that in males. The fact that a uniform reduction in the rate of female deaths began some five years ago, about the time when women were beginning to ride the

bicycle extensively, Dr. Abbott considers significant, and he is inclined to attribute the decrease in the death rate to the great increase in open air exercise among women which has been inaugurated by the use of the bicycle."




Despite what some thought the bicycle boom swept Lithgow and the nation in the early years of Federation – they were reasonably priced and many locals used them to get to and from work. Bicycle Works began to spring up everywhere, including several new businesses in Lithgow. There were those young ladies who even had their photos taken with their 'lady's push bikes' - below.



Many bicycle dealers sponsored either part of or all the local cycle races around Lithgow and district. Most became known for their 'pushbike repair service' and especially tyre repairs using glue-on or burn-on patches. Respoking was another job carried out as was chain repairs such as lengthening or shortening or repairing broken chains and replacing damaged links. Special bike chain repairing equipment was set up out the back of their workshops. Ironically many went on to sell another craze for a time, the steel wheeled roller skates, which they sold from their store.

With the membership of the Lithgow Cycle Club increasing all the time and regular riding events taking place in both Lithgow and other towns such as Bathurst, Orange and Katoomba, so Lithgow was fortunate to have Mr. G.H. Yates Cycles in Main Street sponsor various events.

CYCLES!

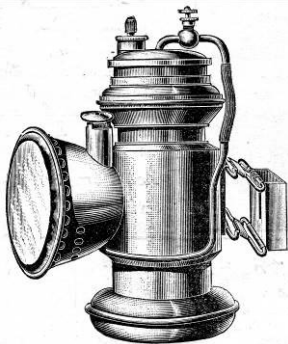


G. H. YATES,
 BICYCLE ENGINEER and General Mechanic.
 Agent for Bennett and Wood's famous Imperial
 Rover, Raleigh, and Speedwell. Bicycles for hire
 at 9d per hour, 2s 6d half day, 4s 6d per day, and
 10s per week. A big stock to select from. Learners
 taught. Sundries at Sydney prices.

Having worked for several years in the
 leading English cycle firms, I am well qualified to
 execute all kinds of work.

MAIN STREET, LITHGOW.
 Agent for Beale Co. Sewing Machines and Pianos.

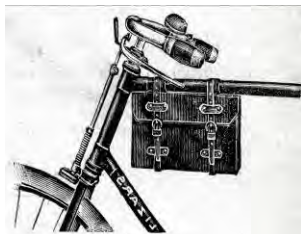
Mr. Yates placed this advertisement in the Lithgow Mercury in May 1900. He was a Bicycle Engineer and General Mechanic. He was an agent for Bennett & Wood's famous Imperial Rover, Raleigh and Speedwell cycles. The B&W cycle establishment had been established by Mr. Charles W. Bennett and Mr. Charles R. Wood in 1882 in Sydney. Charles Bennett was an accomplished penny-farthing bike racer. Initially they imported penny-farthings and in 1897 started to make their own cycles.



Mr. Yates' store kept a big stock of cycles to choose from along with a selection of cycle sundries and spare parts at Sydney prices, items such as the acetylene cycle lamp – left. As new accessories came onto the market he would “order one in” to check its quality and


performance. He later sold acetylene in his store for the various lamps using this material.

At the time he also had 40 cycles that were available for hire, especially for people who came up on the train to Lithgow to go sightseeing. Rental charges were 9d per hour, 2s 6d for half a day, 4s 6d for a whole day or 10s for the whole week. He also offered to teach the young and old to ride. Before coming to New South Wales he had worked for several years with leading English cycle firms so he was well qualified to execute all kinds for work.



In 1897 a local group of riders had formed a club in Lithgow known as the Lithgow Branch of the League of New South Wales Wheelmen. Several members of the Bathurst organisation had attended their initial meeting to assist in helping establish the branch in Lithgow. In mid-January, 1898, they placed this advertisement, below, in the Lithgow Mercury advertising their upcoming event.

League of N.S.W. Wheelmen.
 LITHGOW BRANCH.



**GREAT
 CYCLING CARNIVAL**
 On LITHGOW SHOWGROUND.
ANNIVERSARY DAY, January 26.

OVER 160 ENTRIES HAVE BEEN RECEIVED, including
 riders from New Zealand, West Australia,
 Sydney, Newcastle, Bathurst, Orange,
 Mudgee, Cobarr, Hillgrove, Penrith.

THE FOLLOWING CRACK RIDERS WILL COMPETE:—George Mackham, C. Miller, J.
 McInnes, C. Chapman, and Brown (Sydney), H. Sargent (an amateur champion), R. Matton (Bathurst),
 W. Davison (Hillgrove), F. G. Simpson (New Zealand), J. Elliott and C. Morrison (West Australia), and
 C. Goodwin (Lithgow), One Mile Western Champion.
 Besides these, 30 other outside riders will take part. For full list of entries, look in the sporting column.

Positively the biggest gathering of crack riders ever brought together in the country.
 COME AND SEE THEM RACE. LITHGOW TOWN BAND SPECIALLY
 ENGAGED FOR THE DAY.

Admission—**ONE SHILLING. Children Half-price**

LOOK OUT FOR THE BICYCLE PROCESSION AT 11 O'CLOCK IN THE MORNING.
 Dr. LEEPER, Treasurer. ... A. G. HUNTABLE, Secretary.

After entries closed they released the handicaps stating what had been allotted for the Lithgow Bicycle Club's races on Thursday next (Queen's Birthday):— Half-mile Handicap. — J. Young scratch, G. Brooks scratch, W. Jones 20yds, J. Jones 30, A. Clifton 40, J. McGrath 45, J. Jaques 50, W. Honey 50, G. Yates 60, W. Hall 70, J. Winter 75, J. McGann 75, A. Butterton 85, S. Kershaw 85, W. Loneragan 95, W. Cook 100. Mile Handicap.— J. Young scratch, G. Brooks scratch, W. Jones 40, J. Jones 60, W. Honey 90, J. Jaques 100, G. Yates 120, W. Hall 140, J. Winter 150, J. McGann 150, A. Butterton 170, S. Kershaw 170, W. Loneragan 190, W. Cook. Mile-and-half Handicap. — J. Young scratch, G. Brooks scratch, W. Jones 60. J. Jones 80, J. Jaques 150, G. Yates 180, W. Hall 200, J. Winter 225, J. McGann 225, A. Butterton 255, S. Kershaw 255, W. Loneragan 285, W. Cook 800. For the scratch race there is also a good entry.

By January 1900 Mr. Harry Everitt's Cycle Depot was in full swing in Lithgow. He claimed it was a “Wheel of Honest Value”, as has been proved by the marvellous performance of Mr. J.A. Jones, who, on the 10th January, just passed, climbed the “Gap” hill mounted one of the famous ‘Cleveland Machine’. No other machine has ever stood this great test! Prospective customers were urged to call and inspect his cycle shop where sundries of all descriptions were kept in stock and tyres were made and repaired.

LITHGOW ATTRACTIONS

By August 1900 Mr. H.H. Godwin, a 'Watch. & Clock Repairer and Optician' had been appointed the Local Agent for the 'Dominion Bicycle'. He asserted it was one of America's best high grade wheels with all the latest improvements, equal in every respect to many other machines sold at £25. Mr. Godwin was selling the Dominion for only £14 10s.

The image below, supplied by the Lithgow City Council, shows the World Heritage area featuring stunning rock pagodas, sandstone cliffs, canyons and breath-taking scenic views. Known as the Gardens of Stone National Park the picturesque landscape will provide spectacular photos to take home from your trip to Lithgow for the GEMBOREE 2017, 53rd National Gem & Mineral Show which is being held at the Tony Luchetti Showground in Lithgow in New South Wales from Friday 14th to Monday 17th April, 2017.

NATIVE CYCLES
Built to Order.

NATIVE No. 1, £15 10s Cash.
AMERICAN PATTERN, No. 2, £13 Cash.
B.S.A. PATTERN, No. 3, £12 10s Cash.

TYRES—YATES' NATIVE, Dunlop Principle.
 Complete Set, with Pump, from £2 per Set
OUTER COVERS—NATIVE No. 1, 12 Months'
 Guarantee, 20s each; No. 2, 17s 6d each; No. 3,
 13s 6d each.
INNER TUBES—from 6s 9d; Best, 9s each.
ACETYLENE GAS LAMPS—from 9s 6d.
CARBIDE—9d per lb.

SECOND-HAND CYCLES—a FEW CHEAP, from
£2 10s to £7.

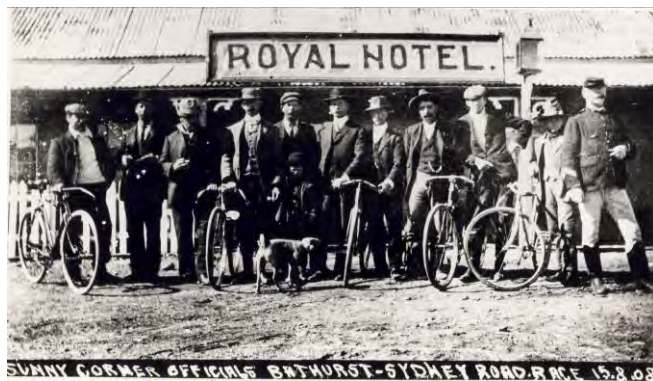
Enamelling and Repairs of All Kinds Executed
 at Sydney Prices.

G. H. YATES, NATIVE CYCLE BUILDER,
LITHGOW.



You can walk among the exquisite and varied sandstone cliffs, rock pagoda formations and canyons at Gardens of Stone National Park. The extraordinary rock shapes, the stunning scenic views over the valleys and the mesa of Pantoneys Crown make this area of the Greater Blue Mountains World Heritage Area a must for photographers and lovers of open spaces. This rugged territory is also a haven for adventurers, with excellent opportunities for canyoning, mountain-biking and serious bushwalking or hiking.

Mr. G.H. Yates must have had second thoughts or was having supply issues because by mid 1900 he had become a Native Cycle Builder, as well as selling two other brands. Even being a very capable bicycle mechanic would have been kept on his toes suppling other brands. He was selling the Native No 1 cycles for £15 10s cash, American Pattern cycles No 2 for £13 cash and B.S.A. Pattern No 3 for £12 10s cash. He was also selling second-hand cycles as well.



Lithgow riders travelled to other venues in the Central West and the Mountains to race. Some took part in the Bathurst to Sydney Road Race in August 1908. The Sunny Corner officials are in front of the Royal Hotel, above.

There is certainly plenty to see while enjoying your leisurely walk. Along the way you can admire rare yellow pagoda daisies bursting from the rocks, blue tongue lizards and wood geckos basking on the warm stone. You may even be lucky enough to spot a koala in the east of the park.

If the old legs are not what they used to be you can still get a sense of the majesty of Gardens of Stone without the sore legs as you would be able to take one of the wonderful driving tours, so you don't miss out on anything.

Consider arriving early for the GEMBOREE 2017 or staying on longer afterwards to visit this and other picturesque locations around Lithgow. If you have questions or need help contact the Lithgow Visitor Information Centre, 1137 Great Western Hwy, Lithgow. NSW 2790 or telephone 1300760276 or email tourism@lithgow.com or www.tourism.lithgow.com

