

VICTORIA'S HERITAGE

CRESWICK REGIONAL PARK AND SURROUNDS

Creswick, about 20 km north of Ballarat, is one of Victoria's key gold mining localities. It began as an alluvial goldfield, but in the 1870s and 80s a large amount of gold was won from deep lead mines in the area. These mines, operated by companies rather than individuals, involved sinking shafts hundreds of metres to ancient gold-bearing riverbeds that had been buried by later lava flows. Today you can still see the huge heaps of gravel and other material dug from the mines in order to reach the buried gold.



The House and Nursery at Creswick, date unknown. Courtesy of DSE.

The Creswick district was one of Victoria's first wheat-growing areas. Today you can visit Andersons Mill at Smeaton north of Creswick, a five-storey bluestone water-powered flour and oat mill built in 1861. In addition, timber was produced in the district, and it was the site of early forest protection efforts, and experiments in growing exotic trees such as pines. The Victorian School of Forestry, established at Creswick in 1908, has trained many of the state's foresters over the years.

In addition, Creswick was the home of notable people like the famous Lindsay family.

Today, Creswick Regional Park protects much of the remaining forest and wildlife around the town, and there are many historic sites to visit.

AN OVERVIEW OF GOLD MINING AT CRESWICK

THE BEGINNINGS OF MINING

Gold was discovered in the area in 1851. The discovery is generally attributed to two parties of miners known as Main's and Hogben's. The subsequent gold rush didn't begin in earnest until 1854 and rapidly led to the opening up of an extensive network of shallow leads around the site of the present town. The focal point for the rush was a series of low hills including Grahams, Bald, Hard, White, Humbug, Lucknow and Ironstone Hills.

AFTER THE RUSH – FOUR TYPES OF MINING

When things had died down a little after the initial 1854 rush, four types of mining were conducted at Creswick :

- Re-working abandoned auriferous ground with puddling machines and sluice boxes

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- Working cement – ancient river gravels cemented together into a hard substance
- Extracting gold from quartz reefs
- Tracing and mining deep alluvial leads

SLUICING AND PUDDLING – THE POPULAR WAY TO GET HOLD

Sluicing involved using water to wash away topsoil from the hills and, in the process, flush out any gold present in that soil. In dry mining areas, sluicers relied on a vast network of open channels (races) to bring water down from higher country. Sluicing therefore depended on a good water supply and was seasonal. When the water was available, miners worked around the clock.

The hills opened during the 1854 rush were particularly suitable for sluicing as they had deep gold-bearing topsoil.

HUMBUG HILL HYDRAULIC GOLD-SLUICING SITE

Humbug Hill was covered in rich gold-bearing gravel and rock to a depth of 30 feet. Water was carried to the works in an open channel from a reservoir now known as Russell's Reservoir, probably built by the Humbug Sluicing Company. The channel (or race) wound its way over a large distance through intervening gullies to the hill. The Humbug Sluicing Company used a patent bituminised pipe to cross Slaty Creek; the pipe had a diameter of 8 inches and was half a mile long.

In 1859 at Humbug Hill a sluicing party worked shifts day and night, until the water ran out, washing away 1,500 cubic yards of soil to obtain 245 ounces of gold.

The Humbug Hill site is important for its status as one of Creswick's main sluicing areas and, as it has not changed much it can tell us a great deal about the technology and processes employed in this industry. Its listing on the Victorian Heritage register recognises its importance.

PUDDLING BY HORSEPOWER

Many miners used horse-powered puddling machines but the disadvantage was that they could not treat as much ground as quickly as by sluicing. The main advantage was that puddling needed much less water, and miners using puddlers could therefore work a longer season than the sluicers. In 1859 there were 159 puddling machines at work in the Creswick goldfields, and this remained fairly constant until the droughts of 1865 and 1866 which forced many puddlers out of business.

NO TIME FOR NEW-FANGLED GADGETS

Many miners, either because they could not afford the capital investment needed or simply because they preferred the old methods, did not embrace puddling machines. These miners, called fossickers, stuck with the tub, cradle and tin dish and re-worked areas left by other miners in the hope of finding gold they had missed. Some were lucky.

DEPARTING CRESWICK FOR RICHER PICKINGS

Gradually through the 1860s Creswick's miners left the area, attracted by word of richer pickings elsewhere. By the end of the 1865 and 1866 droughts, only Chinese miners persevered with shallow alluvial mining, particularly sluicing. Their hard work paid off; for example in 1874 a Chinese party found a 96 ounce gold nugget in Mosquito Gully near Spring Hill.

OTHER MINING ACTIVITIES

In the early 1860s mining companies, using steam-powered crushing machines to pulverise cement and quartz, produced small quantities of gold. All were out of business by the mid 1860s. There were further unsuccessful attempts at quartz mining in the 1890s.

DIGGING DEEPER IN THE SEARCH FOR GOLD

After the 1854 rush, miners started to trace the shallow leads (gold-bearing stream valleys) down the hills and under the volcanic rock (basalt) covering the plains. These ancient

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river systems were usually reached by sinking shafts through the basalt, but there was some tunnelling into the sides of hills. Some produced rich rewards while others were unproductive.

In the early days most companies used horse-powered haulage whims. Others used steam engines, although this was not common.

One of the most profitable leads was called Bald Hill, and another the Red Streak. In 1859 the Red Streak was the principal place in the area opening new ground. Gold from the lead was won from deep and wet ground; most of the other Creswick leads drained into it.

Other profitable deep lead mines were The Imperial, Australasian, Sir Charles Darling, Junction, Rose of Allandale and Hit-or-Miss, which was more hit than miss as it went on to become one of the greatest gold producers of the 1860s.

BIGGER AND BETTER – THE DRIVE TO SUCCEED

From the mid 1860s many companies went out of business, because they had run out of either money or gold reserves.

Some companies re-organised to adapt to and capitalise on new developments which required deeper mines and longer drives (tunnels). The Australasian Company, formed in 1867, led these developments and mined profitably until the mid 1870s when other companies were encroaching on its territory.

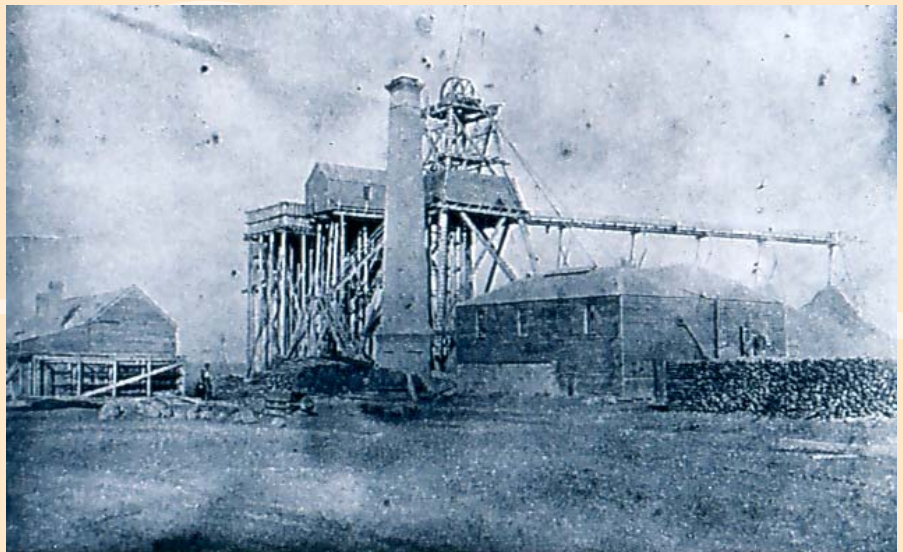
In 1872 gold was discovered 100 feet down on Spring Hill and led to a rush, and then the discovery of three more leads under the basalt. These leads came together with the Red Streak, and together were known as the Berry Lead. Victoria's richest deep lead mines of the 1880s and 1890s were centred on the Berry

Lead, including Madame Berry and the New Australasian Company. Aided by new diamond drills, the mining companies extracted impressive amounts of gold and news of their success attracted more prospectors. One of the major gold producers was the New Australasian Company which is remembered more as the site in 1882 of Australia's worst mining disaster (see below).

THE PARTY'S OVER – THE END OF LARGE-SCALE DEEP LEAD MINING

Amounts of gold extracted from Creswick's deep lead mines decreased steadily as reserves were exhausted, and most of its mines had closed by the early 1900s. Machinery was sold off and removed from the field. Some of the mining by-products such as water worn quartz pebbles were used by the railways for ballast, and later for road building.

The early 1900s saw an attempt to find more gold through bucket dredging and pump sluicing, but except for isolated pockets it was not successful. Further attempts were made in the 1930s to re-work the deep leads, but these too met with failure.



North Australasian Mine, North Creswick. Courtesy of DSE.

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THE NEW AUSTRALASIAN MINING DISASTER

Today, the once prosperous New Australasian Mine at Creswick is remembered as the site of Australia's worst gold mining disaster when, early in the morning of December 12 1882, 22 miners died in the tunnels after being trapped when a torrent of water flooded the mine.

These men died leaving 17 widows and 75 dependent children. As the dependents of paid-up union members, the families received 70 pounds in compensation. There was also a public appeal to help the bereaved families but the directors of the New Australasian Mine declared they would pay no aid until they had consulted their shareholders.

EMPLOYERS AT FAULT, SAY JURORS

In March 1883 an inquest was held and the jurors delivered a guilty verdict, finding the mine manager at fault.

"We find that the deceased men were drowned in consequence of a burst of water into the New Australasian Company's mine. We are of the opinion that the burst of water was occasioned by an error of judgement on the part of Williams [sic] Nicholas, the mining manager, in approaching too near the old workings, which contained a large body of water, which error of judgement might have been committed by an ordinary mining manager, and which error we believe resulted in a mistake in the survey."

The jurors in their verdict called for better safety provisions in mines, including better signalling and more escape routes. These changes were made law in 1883.

An accident on this scale did not occur again in the Berry Deep Leads, but mining continued to be dangerous and incidents increased as gold yields declined and miners worked as tributers. In 1884 a quarter of Creswick's miners applied to the union for accident relief. Almost a decade later, in 1891, almost 40% sought relief at a time when foul air was the major problem in the mines.

HOW THE NEW AUSTRALASIAN TRAGEDY UNFOLDED

On the day of the disaster most of the miners underground were some 1,600 feet away from the main mine shaft working to block out washdirt (gold bearing river gravels) from the tunnels. At the same time two contractors – H. Reeve and W. Mason - were drilling a new drive (tunnel) in the opposite direction towards abandoned mine workings which, since they were no longer worked, had filled up with water.

At 4.45 a.m. Reeve and Mason struck the old (and flooded) mine workings and a torrent of water gushed into the tunnels.

They raced along the tunnel to the main shaft and warned the platman, Michael Carmody, of the approaching wall of water before making their escape up the incline.

Carmody, showing a disregard for his own safety, ran ¼ mile down the tunnel to warn his mates Chegwin and Manly. He then made his way back up the tunnel before escaping up number 5 rise.

Chegwin and Manly were able to raise the alarm and a group of 29 miners made two attempts, against rapidly rising flood waters, to reach number 5 rise. Only one miner made it to safety on the first attempt, being dragged by his co-workers by his hair into the rise. As the water rose to neck level a second attempt was made, but again only one miner made it to safety.

27 miners were trapped underground. They retreated further into the drive (tunnel) climbing into number 11 rise. Tragically the air quickly became stale (the oxygen/air was exhausted or ran out) and many miners became unconscious, falling into the water and drowning.

As this human tragedy played out underground, on the surface, all available engine power was used to try to pump out the

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flood water. More than 500,000 gallons per minute were pumped from the mine. Of the 27 trapped miners only 5 were brought safely to the surface.

ON SITE TODAY

On site are the remains of the mullock heap, some remnants of the quartz pebble dumps, a memorial to the miners and an interpretation sign.

MINING TECHNOLOGY

A far cry from the traditional tub, cradle and pan, and even from the horse-powered puddling machines, all the deep lead mines had a battery of modern machinery, which although it may have varied in cost and size included some basic pieces:

- Steam engines for pumping, winding and puddling
- Steam boilers and brick chimney stacks
- Wooden poppet heads
- Raised tramways
- Cast iron puddling machines
- Some also had crushing batteries

MADAME BERRY COMPANY

Creswick Goldfield – Berry Deep Lead

The following history was extracted from The Berry Deep Lead: an historical assessment, CF&L, October 1986 Charles Fahey

The Madame Berry was the most famous and richest mine on the Berry Deep Leads system. It had 20 original shareholders and was registered in 1878. Work on Number 1 shaft started in 1879 and on number 2 shaft in 1883.

The number 2 shaft was 462 feet deep and, in 1886, it was reported that £45,131 had been spent on it. In addition to wages this included a 90 foot poppet head, 90,000 bricks, a pumping engine, a

cylinder engine for winding, and two boilers. Two more boilers were added in 1884 and three puddlers and a secondhand engine. The mine represented the most advanced technology of its day. The plant at the mine was more extensive than that of most city factories, and sinking the shafts through drift was a major engineering feat.

These capital works on number 2 shaft were funded by the enormous returns from number 1 shaft. By 1885 the drive from number 1 shaft had been extended by 2,000 feet and all hands were employed blocking at the extreme end of the mine.

With 250 employees the mine was one of the largest industrial concerns in Victoria; only Melbourne's largest foundries would have employed more men.

Number 2 shaft was just as successful as number 1 and, by the time Madame Berry ceased operation in 1895 the mine had produced 307,312 ounces of gold and had paid dividends and royalties of £983,770.

Little remains today apart from a large mullock heap.

Eatons Dam is another interesting example of early stone and earth construction techniques.



Chopping a tree at Creswick, 1915. Courtesy of DSE.

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ONE MAN'S CRUSADE TO SAVE THE FOREST

The following draws on Angela Taylor's book "A Forester's Log. The Story of John La Gerche and the Ballarat-Creswick State Forest 1882-1897", Melbourne Uni. Press 1998.

The two decades following the discovery gold at Creswick saw the once pristine forest around Creswick and Ballarat stripped bare to supply timber to the bottomless pit of the mining industry. In addition the digging, sluicing and loss of vegetation led to serious erosion and weed problems, many of which are still present today.

FOREST CONSERVATION 19TH CENTURY STYLE

In the 19th century the conservation of forests was very different from today's practices. Forests were managed in order to produce a ready supply of timber for the mining industry and a constant stream of income for the government. There was little regard for sustainability as we know it now..

JOHN LA GERCHE – CRESWICK'S FIRST FORESTER

"For a forester in late nineteenth century Victoria, there was no training, no rule book, and few precedents." (Taylor, A 1998: 48)

In 1882, at a time when the role of forester was essentially that of a security guard employed to protect the government's commercial interests, John La Gerche became Creswick's first forester.

La Gerche, the son of a wealthy farming family from the island of Jersey in the English Channel between France and England, was appointed Crown Lands Bailiff and Forester. He was responsible for looking after the forest and prosecuting anyone caught illegally cutting or removing timber.

The area for which La Gerche had responsibility covered 60 square miles (or 14,000 acres) is bigger than Jersey (45 square miles) where La Gerche was borne. He had no

map, or measuring tape to make one. Neither did he have clear instructions from his government bosses regarding what they expected of him, nor how to interpret the laws under which he brought prosecutions. Clearly a job designed to cause frustration but La Gerche was up to the task.

Pursuing the miscreants [law breakers] – especially illegal prop cutters "...[John La Gerche was]... *all that stood between a well managed forest and a denuded one*" (Taylor, A. 1998:7)

La Gerche took his work seriously and history presents him as a man who was both dedicated and tenacious in pursuing prosecutions against those who broke the rules. Getting those prosecutions to stick was, however, a different matter. The law breakers often had powerful allies in the judiciary who, in turn, had strong links with the mining industry which funded the best lawyers the area could provide. They also had no shortage of witnesses to lie for them, often gave false names, and it was very difficult for La Gerche to prove any wrongdoing unless he had actually caught them in the act – something he did try very hard to do!

Angela Taylor in her book *A Foresters Log* draws on the log and letter books meticulously kept by John La Gerche in his daily working life and discovered again in Lands Department archives in the early 1990s.

La Gerche paints a picture of a forest full of people - in 1891, for example, he records 106 people living in the forest, the majority illegally. Taylor uses La Gerche's logs to illustrate the ongoing battle of wits he sustained with the illegal prop cutters – whose activities caused the most damage to the forest as they cut saplings just as they reached the right size for their purposes. Taylor describes how he would camp out all night to try and catch them.

It is difficult to imagine the sheer drive and motivation which kept La Gerche patrolling his 60 square miles! But it is likely that his sheer

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passion for the forest is what drove him - plus his desire to ensure a ready supply of saplings which could be sold by his employer, the government. This, rather than any ecological concern, is probably what caused him to try out experimental plantings in the first instance until his enthusiasm took hold with belated encouragement from a new boss.

LA GERCHE'S FOREST PLANTINGS – SAWPIT GULLY

"The pine plantations...are a living monument to John La Gerche's pioneering re-forestation of old diggings...[his] mixed plantings at Sawpit Gully have created - more than one hundred years later - a picturesque forest."
(Taylor A. 1998:5; 139)

Between 1888-1899, supported by a new Conservator of Forests Mr G. S Perrin, La Gerche began an experimental nursery at Sawpit Gully, an area left badly scarred and eroded by the mining industry.

In fact 1888 was not the actual start of the experiments. La Gerche had long been eager to plant an experimental nursery but his ideas had met with little enthusiasm from his masters. His experiments, conducted with grudging approval, included failed plantations of blue gum, quinine and tea tree. And, two years before he gained official approval from Perrin, La Gerche, acting on his own initiative and with advice from Ballarat's forester, had planted 700 trees using seed obtained from other foresters and farmers (Taylor A 1998:133). It was this plantation which was extended between 1888 and 1899.

By 1899 Sawpit Gully plantation covered 300 acres and was being run by a trained nurseryman appointed by Perrin. La Gerche left the forest in 1897 at the age of 52 and died 16 years later at his home in Ballarat leaving a lasting legacy in the forest.

LA GERCHE'S LEGACY – SAWPIT GULLY TODAY

John La Gerche's original plantings at Sawpit Gully contain experimental and ornamental

plantings. There is a diverse range of introduced and native species to see.

A walking track, the La Gerche Forest Walk, winds through the nursery plantations and through La Gerche's original plantings. These trees are now more than 100 years old and tower over the landscape. There are interpretive signs along the track telling La Gerche's story.

Sawpit Gully is also the site of the original **Creswick Forest Nursery**. Inspired by John La Gerche's achievements, the state set up a nursery at Creswick which still operates around the old nursery office.

For an interesting account of John La Gerche and his life in Creswick Forest see Taylor, Angela, *A Forester's Log – the story of John La Gerche and the Ballarat-Creswick State forest 1882-1897*, Melbourne University Press, 1998.