

Brief colonial and aboriginal history

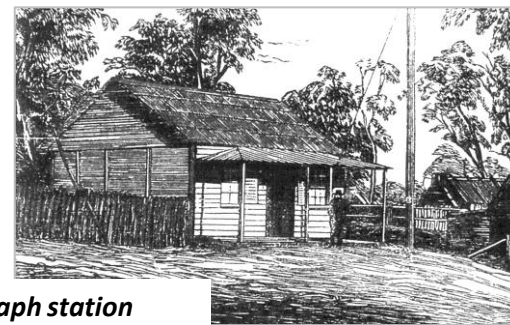
The region of Batemans Bay was originally the home of the South Coast aborigines of the Bugelli-Manji and Yuin tribes for many hundreds/thousands of years. It is estimated that the aboriginal population was about 11,000 when Captain Cook sailed along the coast in 1788 and named Batemans Bay. It was a rich land in which small groups hunted and fished. Seafood and vegetable foods were plentiful. These earliest inhabitants gave names to many of the region's beautiful and unique places.

The coastal areas of the Batemans Bay region were settled by European farming families and loggers from the 1820's onwards. In late 1821, there was a reconnaissance visit to Batemans Bay by Lt. Johnston, and in early 1822 Hamilton Hume and Alexander Berry visited the area. Nelligen was first surveyed in 1827. From 1828 onwards land on the north bank of the Moruya River was settled by farmers. In 1840 Broulee became the headquarters of the police district and in 1851 Moruya became a township.



Photo – Doug Finlayson

In the Batemans Bay region, Araluen Creek and its tributary Majors Creek were a focus for prospectors looking for alluvial gold from 1851 onwards. Also, reef gold veins occurred within shear zones or fissures in granitic and metasedimentary rocks. Near the coast the richest veins were those at Candoin Creek, near Moruya, Mogendoura, Bimbimbie, Big Hill near Batemans Bay and at Brimberamala farther inland.



Araluen telegraph station
1865. National Library of Australia

Geology of the Batemans Bay region

Gold mining

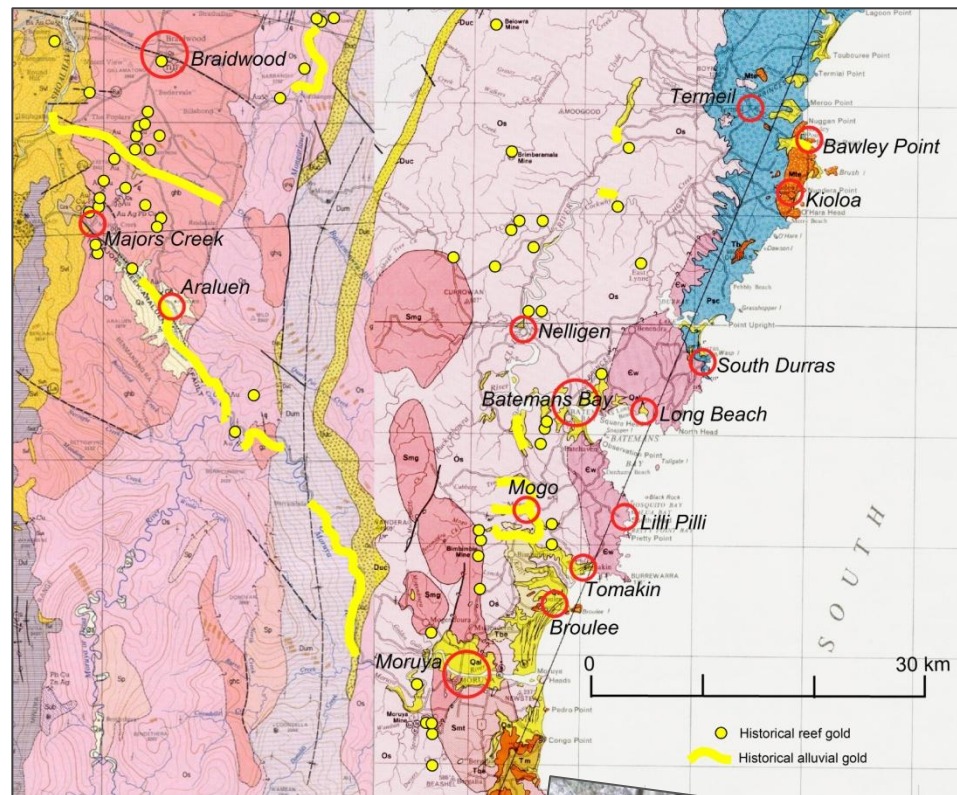
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Gold mining sites

The majority of mining in the Batemans Bay region was connected with the search for gold, either as alluvial gold found in rivers and creeks or as reef gold mining associated with granite plutons and metasediments inland from Batemans Bay.



Panning for alluvial gold



Ore stamp battery





Gold in the Earth's crust

Gold is a very stable element and can exist in a wide range of conditions. It is widespread in the earth's crust and can be concentrated into ore deposits deep within the Earth's crust by hot, high-pressure, salty water circulating to depths of 10 to 20 km. Any gold present in the rocks is sweated out and goes into solution as complex ions. In this form, dissolved gold, along with other elements migrates wherever fractures in the rock allow the fluids to pass up towards the surface. As temperatures decrease the gold becomes insoluble and begins to crystallise, usually in association with quartz (SiO_2) to form primary gold deposits as veins.

Veins and reefs of gold-bearing quartz can occur in many types of host rock and in the **Batemans Bay region** are commonly associated with the Silurian-Devonian granite plutons, the Braidwood Granite and Moruya Granite, and the highly deformed Ordovician siltstones, sandstones, mudstones and slates. Other important metal-bearing minerals can also be found in the quartz reefs with the gold. The most common and widespread are pyrite (iron sulphide, "fool's gold") and arsenopyrite, two minerals containing iron and sulphur.

As atmospheric weathering and erosion gradually break down the host rocks and lower the land surface, the quartz and gold veins are eventually exposed. The veins provide far more resistance to chemical attack than the surrounding rocks, so that mechanical weathering is required to fragment the quartz, thereby releasing the gold. Because they are relatively heavy, particles of gold are more difficult to move and so become naturally concentrated in the soil or in adjacent gullies or streambeds.

(Adapted from <http://www.sbs.com.au/gold/>; - Bill Birch, Senior Curator, Museum Victoria)

Mining history in the Batemans Bay region

There is a large amount written on the mining of gold and the ore deposits of other metals around the Batemans Bay region. Some other sources of information are contained in the bibliography at the end of the historical mining descriptions set out here.

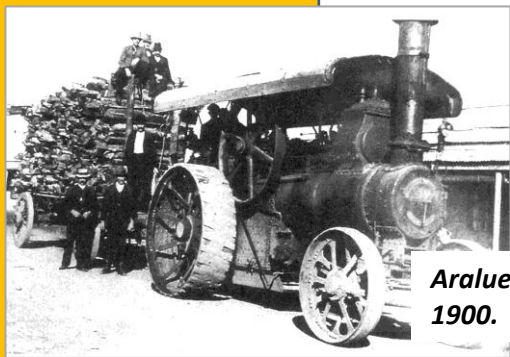
Mining targets

The vast majority of mining in the Batemans Bay region has been connected with the search for gold, either as alluvial gold found in rivers and creeks or as reef gold mining associated with granite plutons and metasediments inland from Batemans Bay.

In the process, other ore deposits were discovered but these were rarely worthwhile developing.

Note:

- *Only a snapshot of historical mining information is presented here.*
- *Many historical gold mining sites are now on privately owned land.*

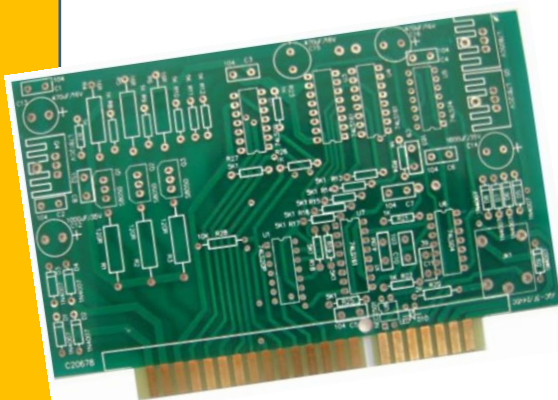


Araluen traction engine, about 1900.
National Library of Australia

Ore from reef mining ventures was commonly crushed in a stamp battery like this one near Mogo before being treated chemically to extract the gold. Power for the stamp batteries was often provided by traction engines with a belt and pulley system or by waterwheels.



*Gold is used extensively in
electronic circuit boards*



Not all gold is easily recovered. It may be finely dispersed throughout the host rock. Hence the ore has to be crushed and often leached in a cyanide solution. This solution is then further refined with other chemical solutions to precipitate the gold concentrate.

An ore concentrate then has to be smelted to recover the gold as an ingot. The ingot is then assayed to determine how pure it is. Because gold is a soft metal it is often alloyed with silver to make stronger jewellery, watches and table ware. Gold bullion is held in banks as a currency tradeable commodity. Gold is used extensively in the electronics industry for circuit boards.

Around Batemans Bay

The larger gold vein deposits in the Batemans Bay region were generally found close to or within the granites, the deposits becoming smaller and poorer with increased distance from the granitic rocks.

The veins occurred within shear zones or fissures. The richest veins were those at Candoin Creek, near Moruya, Mogendoura, Bimbimbie, Big Hill near Batemans Bay, at Brimberamala, and at Majors Creek. South from Maruya, gold was mined around Mount Dromedary (Gulaga) and the Tilba area. Deposits generally occurred as quartz veins from several centimetres up to 1 metre wide and many existed as groups of veins.



Gold bullion

NSW Southern Mining District

In the 19th century, prospecting and mining activities in the Colony of New South Wales were regulated by Government – by the then Department of Mines. Their first available Annual Report shows that activity was reported by **Districts** and that this region of New South Wales around Batemans Bay and Braidwood comprised much of the **Southern District** which, in turn, was further subdivided into **Divisions**, each administered by a Government official called a **Mining Registrar**.

Early Annual Reports show that in 1876 the *Southern District* was already subdivided into seven Divisions, presumably in order of importance as follows: **Braidwood, Araluen, Major's Creek, Little River (Mongarlowe), Nerrigundah (west of Bodalla), Shoalhaven, and Moruya**. Over the following decades the size of the *Southern District* waxed and waned as new Divisions were added or old Divisions were removed depending on the level of mining activity in each Division.

(Aert Driessen, Australian Institute of Geoscientists)

Alluvial gold was discovered in the Araluen Division in 1851 along the creeks flowing into the Shoalhaven, Deua, and Moruya Rivers draining the eastern side of the Great Dividing Range. Unfortunately, the early official history of the Araluen Gold Field and other fields in the region cannot be fully recounted because Mines Department records only go back to 1875.



Gold was dredged from Jembaicumbene Creek.

Gold is weighed in Troy ounces.

1 Troy ounce (oz) = 20 pennyweights (dwt) = 480

grains (gr) = 28.35 grams (g) in the metric SI system.

Early gold production

Gold discoveries attracted hundreds of 'get rich quick' optimists, all bent on making their fortunes, not to mention the merchants and shopkeepers who followed in their wake. Estimates of the influx of diggers vary widely but the 1861 Census is reported to have shown that some 960 people lived in Braidwood and another 7000, mainly miners, lived in the Southern District.

The *Southern District* in 1877 produced around 11,900 ounces (oz.) of gold in total – 11,200 oz from alluvial sources and 700 oz. from reefs and lodes. The principal Divisions accounting for alluvial production were Araluen (4800 oz.), Little River (2400 oz), Major's Creek (1800 oz), and Braidwood and Nerrigundah (1000 oz. each).

All this gold was produced by some 1070 miners, about 1000 working the alluvial prospects (two-thirds of these miners were of European origin and one-third Chinese), and the 1876 Annual Report of the Department of Mines listed some 70 'quartz' miners (including 10 Chinese), working the reefs and lodes.

(Aert Driessen, Australian Institute of Geoscientists)

The Sydney Mint started striking gold sovereign and half sovereign coins in 1853.



Jembaicumbene Creek dredge about 1900.

NSW gold production, 1878

Some idea of the gold output in the 19th century is given these figures for various Districts of New South Wales including the Southern District.

Alluvial gold



District.	Quantity.	Average per Ton.	Yield of Gold.
	Tons.	ozs. dwts. grs.	ozs. dwts. grs.
Bathurst	23,715	0 3 4.02	3,756 5 0
Mudgee	1,610	0 0 12.00	40 5 0
Lachlan	17,787½	0 4 4.79	3,735 3 14
Southern	27,410	0 0 17.67	1,009 2 12
Total	70,522½	0 2 10.13	8,540 16 2

District.	Quantity.	Average per Ton.	Yield of Gold.
	Tons cwt grs.	ozs. dwts. grs.	ozs. dwts. grs.
Bathurst	2,271 0 0	0 11 14.36	1,317 0 0
Tambaroora & Turon	8,667 0 0	0 10 18.93	4,675 8 12
Mudgee	2,245 0 0	0 12 0.00	1,347 0 0
Lachlan	1,543 0 0	0 10 19.64	834 13 01
Southern	2,022 5 0	0 15 3.74	1,532 10 0
Tumut and Adelong.	6,787 8 0	1 3 9.07	8,070 9 20
Peel and Uralla	2,385 18 0	3 5 20.71	7,888 18 0
New England and Clarence	79 0 0	2 8 18.53	192 13 0
	26,000 11 0	0 19 5.73	25,858 12 8

Reef gold



Geology of the Batemans Bay region

Gold mining

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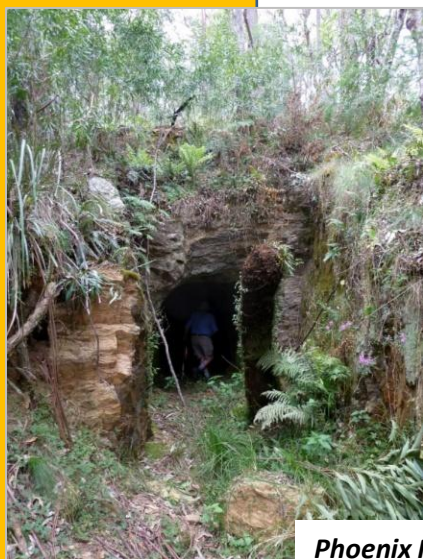
The Old Courthouse Museum Batemans Bay NSW

Nelligen

Only a brief description of selected gold mines around this town is presented here.

Nelligen was a centre for gold mining in the latter part of the 19th Century. The mines themselves were clustered around the upper reaches of the Clyde River and its tributaries, principally the Currowan Creek. Most mines were in the Ordovician shales and siltstones of the Adaminaby Group.

Alluvial mining was carried out along creeks but quite a few reef mining ventures were started. They included **Currowan Mine, Phoenix Mine (Black Diamond Mine), Turners Mine, Clyde Mellow Creek North Mine, Star of Hope Mine, Black Flat Mine, Shoebridges Mine** and **Bimberamala Mine** (included silver).

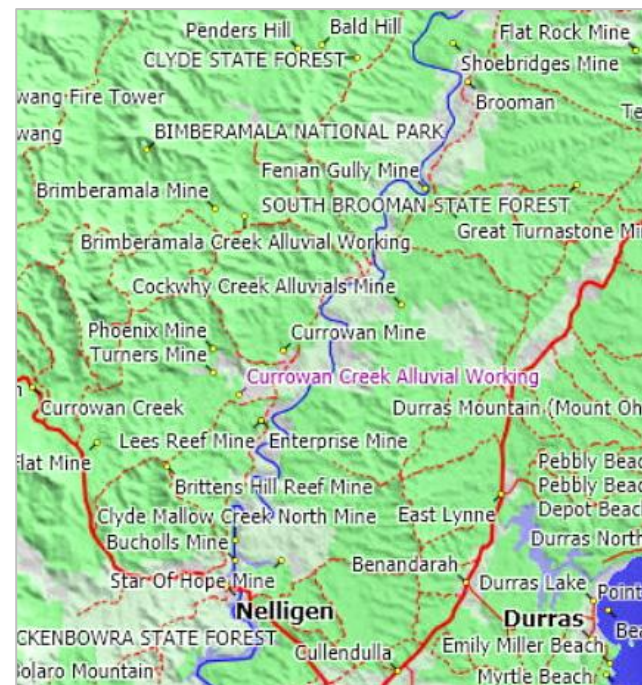


Phoenix Mine

Photo: Batemans Bay Bushwalking Club.

Informal reports indicate local prospectors were probably around the Nelligen area from about 1860 onwards.

At some mines there was significant investment in ore crushing machinery and gold extraction systems.



Nelligen (continued)

The **Brimberamala Mine** is located approximately 14.5km north of Nelligen. There were more than 100 shafts around the mine that were worked between 1890 and 1915. Some shafts were up to 60m deep, with drives and adits up to 100m long. Approximately 2 000 tonnes of ore was raised yielding about 93.595kg of gold - an average yield of 0.046kg/t. The deposits generally occur as quartz veins from several centimetres up to 1m wide and many existed as groups of smaller veins. The mine was one of the more successful in the region.



The **Currowan Mine** workings are located about 9km north-north-east of Nelligen and comprise of shafts up to 27m deep. The auriferous quartz veins are irregular in strike and depth, but have a dominant north-south trend and were worked by Hobbs and party and Green and party between 1890-93. Production is thought to have been small. Ore deposits at the Currowan Mine are regarded as stockwork veins, which swell and pinch abruptly and irregularly.

The **Phoenix Reef Mine** is located approximately 2km west of the Currowan workings and was worked between 1890-91, 1894-95 and between 1912-15. One drive dug into the hill was 300 metres long. There was a five-head ore stamp battery and steam engine that could be heard all down the Clyde River valley. The mine was known locally as the Black Diamond Mine.

Phoenix Mine

Photo: Batemans Bay Bushwalking Club.

Geology of the Batemans Bay region

Gold mining

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In 1871 the town had a post office (1866), chemist, 24 stores (including bakers and butchers), 4 hotels and an Oddfellows Lodge (1866).

About 10% of the population at that time were Chinese who mined at Long Rat to the west on upper and lower Majors Creek.



Doug Finlayson
Canberra, 2016

The Old Courthouse Museum Batemans Bay NSW

Majors Creek

Only a brief description of selected gold mines around this town is presented here.

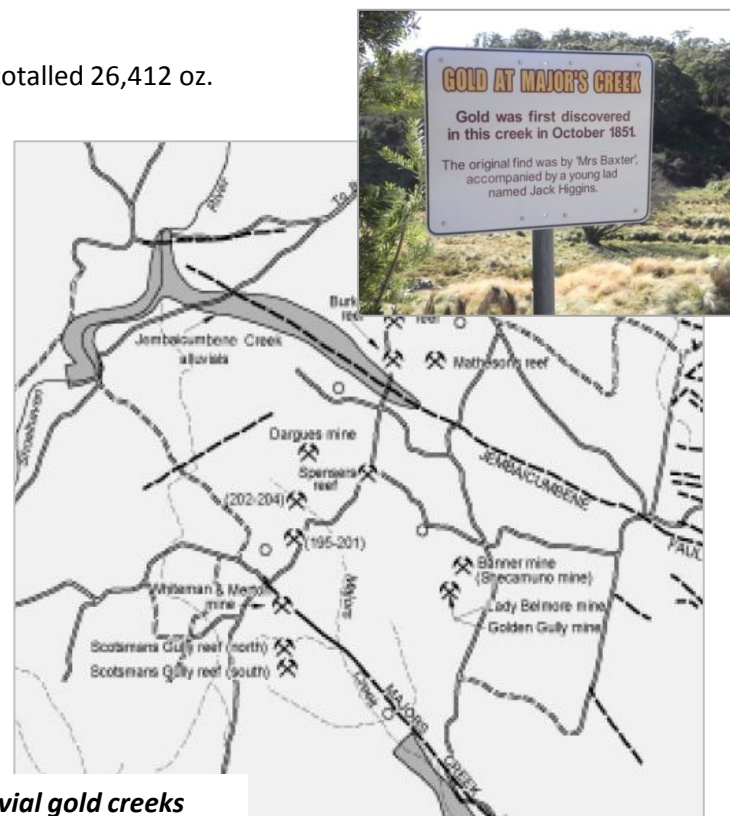
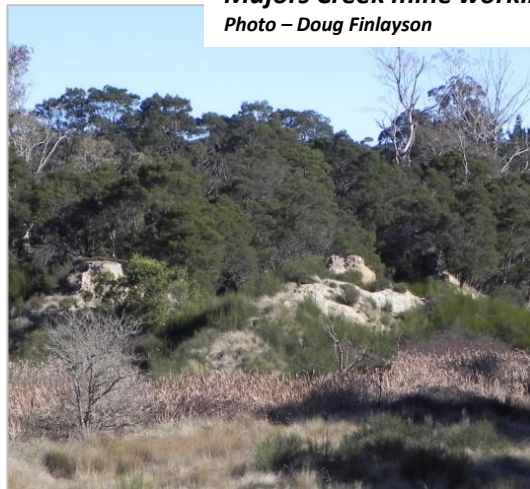
Most of the gold mineralisation around Majors Creek was derived from reef mining. The geology indicated an easterly to north-easterly well developed zonation of reefs, with silver and gold tellurides passing successively into base metal-rich assemblages and lower gold-grade pyrite mineralisation, either laterally or at depth.

Recorded gold production from the reefs of this field totalled 26,412 oz.

(NSW Dept. Primary Industry)

Majors Creek mine workings.

Photo – Doug Finlayson



Gold mines and alluvial gold creeks and rivers around Majors Creek.



Majors Creek (continued)

After the discovery of alluvial gold in 1851, Majors Creek became the largest goldfield in NSW, with about 2000 miners each averaging 1 ounce of gold per day. A shanty town soon sprang up. The alluvial mining lasted until about 1856.

When alluvial mining waned, during 1869 to 1874 attention turned to reef mining. Heavy equipment was needed. The ore was crushed in 5 large stamping batteries, and then treated chemically to obtain the gold. The **Dargues Reef** mine extracted 100-150 ounces per week making it one of the largest gold mines in NSW at that time. Overall, mining in Majors Creek lasted about 80 years until about 1914.

welcome to...

Majors Creek

and enjoy living history

- Majors Creek was named after Major William Sandys Elrington who, in 1827, received a free land grant of 2,650 acres.
- In 1851 alluvial gold was discovered by Mrs Baxter. Within weeks miners and fossickers had descended and 'gold fever' hit the area.
- Majors Creek was the largest historical goldfield in NSW with over 2,000 miners averaging an ounce of gold per day.
- Where there was gold, there were bushrangers. In the 1850's and 60's the gold convoys wound their way up the mountain from the Araluen Valley through Majors Creek to Braidwood and beyond, making them an easy target. In 1865 Ben Hall and his gang, which included Tom Clarke, unsuccessfully attempted a hold up at what is known today as 'Clarke's Lookout'.
- Majors Creek's initial success was based on alluvial gold, which lasted until around 1856. From 1869 to 1874 attention turned to reef mining. The shantytown grew into a permanent settlement with a Police Station, Post Office, several churches and schools, 4 hotels and around 24 stores.
- Highly skilled tradesmen were also attracted to the area. Most of their work can still be seen, including Italian stonemason Peter Rusconi, who in the 1870's, built the bridge over Majors Creek and St Stephen's Anglican Church.
- By the 1900's the goldfields were all but exhausted. The village became another small rural centre serving the surrounding agricultural district.
- The countryside is scarred with evidence of over half a century of gold mining activities, and examples of these can still be seen from this point all the way up the creek to the Majors Creek Hotel. They are a living reminder of this part in the nation's development.

Like to know more about the region and what you can see and do? then visit:
www.kingshwytodiscovery.com.au

Australian Government
Department of Resources, Energy and Tourism

Majors Creek mine workings.

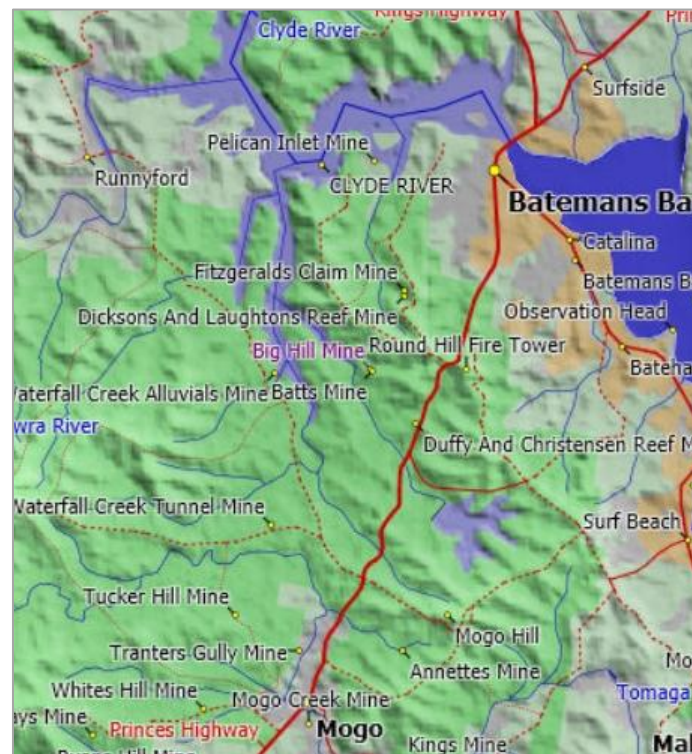
Photo – Doug Finlayson

Batemans Bay

Only a brief description of selected gold mines around this town is presented here.

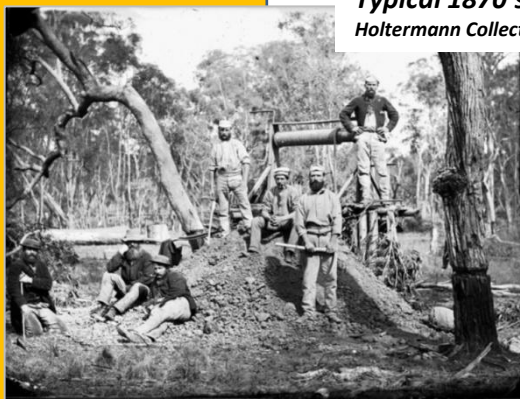
The **Big Hill Reefs** are located approximately 4km west of Batehaven near Sugarloaf Hill, also known as Big Hill along the Lattas Point Road off the Princes Highway. The country rock is Ordovician quartzite, quartz phyllite, phyllite and slate. Alluvial gold had been mined along Waterfall Creek 2 km farther west many years before the reefs were officially worked. Another alluvial deposit north of the Big Hill Reefs and consists of river gravels worked by a dredge. The main reef in this group is known as Fullerton, after its discoverer who located payable gold sometime in 1893. Fullerton's first crushing of 352.5 tonnes of ore yielded 0.520kg of gold, the news of which caused a rush to the area and the opening up of additional orebodies. All the workings within this small group are collectively known as the Big Hill Reefs.

Fullertons Reef discovered in 1893 was from 1.2 to 1.5m thick from the surface down to at least 27.5m. Several drives along the reef were put in and the longest is thought to be around 13.7m. About 21m to the southeast of the main shaft, a second shaft on a parallel reef was sunk. At a depth of 6m, the reef varied in thickness from 7.5cm up to 15 cm with gold freely visible in ferruginous cavities. A party working outside of Fullertons Claim sunk on the parallel reef to a depth of 20m and stoped from the 16.7m level to the surface. Almost 30.5 tonnes of ore from this stope yielded 1.166kg of gold.

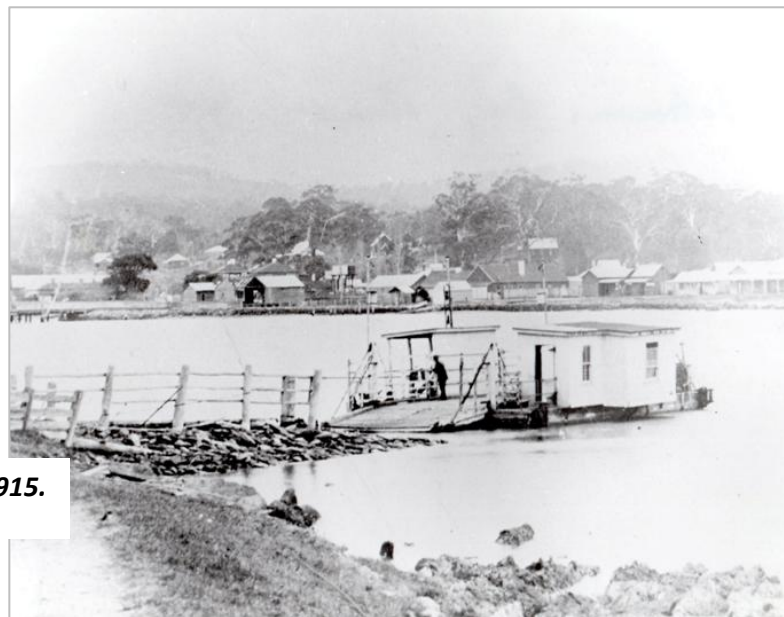


Batemans Bay (continued)

A number of 1890's reef workings are located within 0.5km of Fullertons Reef, none producing payable ore. Officially the whole area crushed around 1 500 tonnes of ore to yield 40.927kg of gold and 1.026kg of silver. Approximately 1.75km north-north-east of Fullertons Reef is **Fitzgeralds Workings**. The reef strikes 210 ° and from the surface down to a depth of 18.2m it averaged between 15 and 20 mm wide. At that level, drives were extended 24.3m along the reef and 7.6m of stopes put in towards the surface. From here, 132 tonnes of ore yielded about 0.062kg of gold per tonne. Officially, this reef produced a total of 0.718kg of gold from 186.9 tonnes of ore - an average yield of 3.84g/t. Less than 100m south of Fitzgeralds workings is the **Dickson and Laughton Reef** worked from a tunnel and shaft sunk on the ridge. The reef strikes northeast, is nearly vertical and up to 1.2m wide. The only recorded crushing of 8 tonnes of ore yielded a total of 0.030kg of gold - an average yield of 3.88g/t. There were other reefs explored in the same general region.



Typical 1870's reef mine, central NSW.
Holtermann Collection, State Library of NSW.

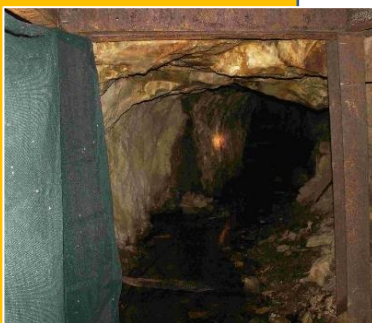


Batemans Bay ferry, 1915.
Australian National Library

Geology of the Batemans Bay region

Gold mining

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Kellys Creek Mine near Mogo.

Information from -
<http://brouleebayfolklore.weebly.com/mogo-goldfield.html>



Doug Finlayson
Canberra, 2016

The Old Courthouse Museum Batemans Bay NSW

Mogo

Only a brief description of selected gold mines around this town is presented here.

In 1857 what was called the Broulee diggings were opened near the mouth of the Tomaga River. It attracted 20 or 30 diggers, but in a few months it was deserted. However the following year, 1858, a new rush broke out with the discovery of gold at **Cabbage Tree Creek** near what is now Mogo. Cabbage Tree Creek flows into Mogo Creek which flows into the Tomaga River. Also there were gold discoveries at **Jeremadra** and other places around what is now Mogo, extending south to **Bimbimbie**.

After the first strike in 1857, the Mogo fields were worked on and off for quite a few years. In 1886, the Moruya Examiner reported that "Mogo maintains a number of diggers but the ground was patchy".

The Mogo Goldfield was on both sides of what is now the Princes Highway. It started about 5km south of the Big Hill Reefs near Batemans Bay and it went as far south as **Pollwombra**, not far from Broulee. The township sprang up in the late 1850s as the result of gold being discovered nearby. It remained a busy centre for over thirty years but, gradually dwindled as the readily accessible gold petered out about 1939.



Mogo (continued)

To the north there was gold at **Mogo Creek Mine** and a bit further north there was **Tucker Hill**. Later on in 1898 a miner named Bellette took 1.24kg of gold from it. Almost 5km west-south-west of Mogo a reef close to Jeremadra Creek was **Marks Mine**. About 1 km to the south, the **Shamrock Mine** yielded 11.8kg of gold.

South of Mogo were the **Bimbimbie Mine**, **Sandy Creek Mine**, the **Perseverance Mine**. The main workings included shafts up to 11.5m deep, with drives and adits up to 730m in length. These workings produced about 198.5kg of gold. That's where **Kellys Creek Mine** was. At the southern end of the Mogo goldfield is **Flanagans or Green Range Reef Mine**. It had shafts up to 7m deep.

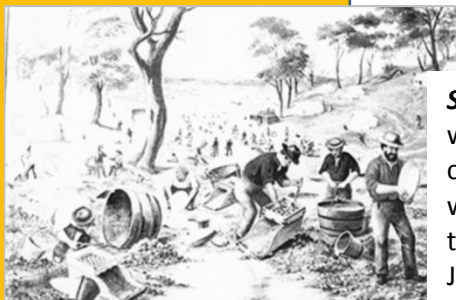
Other watercourses worked for alluvial gold included, **Waterfall Creek, Doctors Creek, McLeods Creek, Brouman Creek, Cockroby Creek, Kellys Creek, Alexanders Creek** and **Dwyers Creek**. Most of the workings were extensively mined for fine gold.



Kellys Creek Mine near Mogo.

Photo: Batemans Bay Bushwalking Club





Gold working at Araluen
in the 1860's.

Araluen and Bells Creek

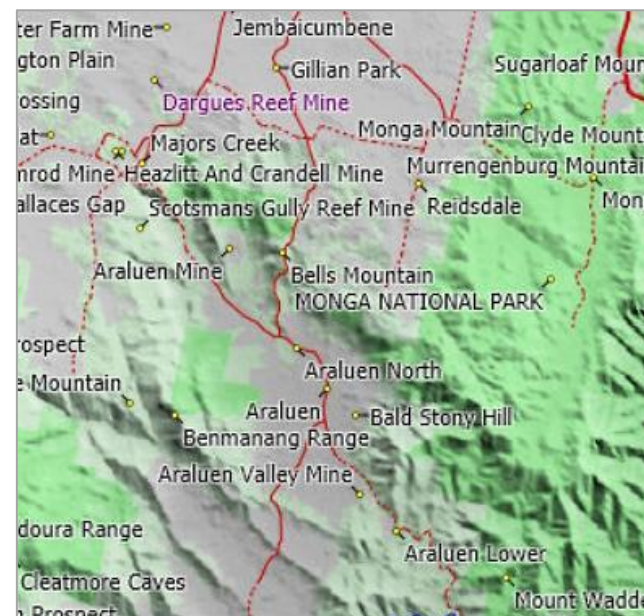
Only a brief description of selected gold mines around this town is presented here.

Gold was found at Araluen by Alexander Waddell in September 1851. Soon miners were working on Araluen Creek and 8 km upstream to the base of the escarpment at Bells Mountain. Initial reports indicate 50-100 diggers were getting returns of up to 2 oz. per man per week. By October 1851 digging had gone to the top of Bells Creek Falls. Soon there were 300-400 miners working successfully, some washed 85 oz. in 4 days. During 1852 the **Bells Creek** goldfields made very good gold returns. One group made 90-95 oz. in a week.

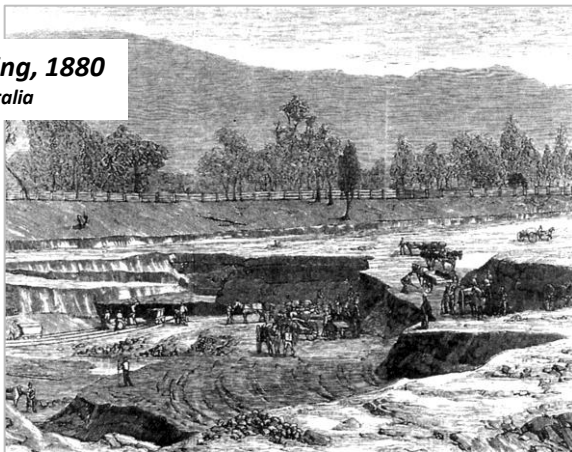
Leased areas continued around Araluen into 1855 with some mining parties making 50 oz. per week. By 1858 larger work parties were mining the Araluen valley, some with up to 30 workers, all doing very well. By 1859 the Chinese had arrived in the valley and some bought leases from established miners. A Chinese joss house and cemetery were developed at Mudmelong in the Araluen valley.

Strip mining was in progress and it was estimated there were 5000-6000 miners between upper Araluen and the coast. In some years there were heavy rains and floods, with housing and equipment being destroyed. By 1861 there were four steam engines working upper valley. In July 1862 the Commissioners reported "**Araluen the most important field in the Southern District**". February 1866 saw another rush in the upper Araluen valley; some groups employed 140 men.

During 1869-1870 there was increasing work at Bells Creek with 500-600 miners working on tunnels and reef mining. A successful Chinese miner, Quong Tart, was one of the Bells Creek most successful miners.



Araluen strip mining, 1880
National Library of Australia

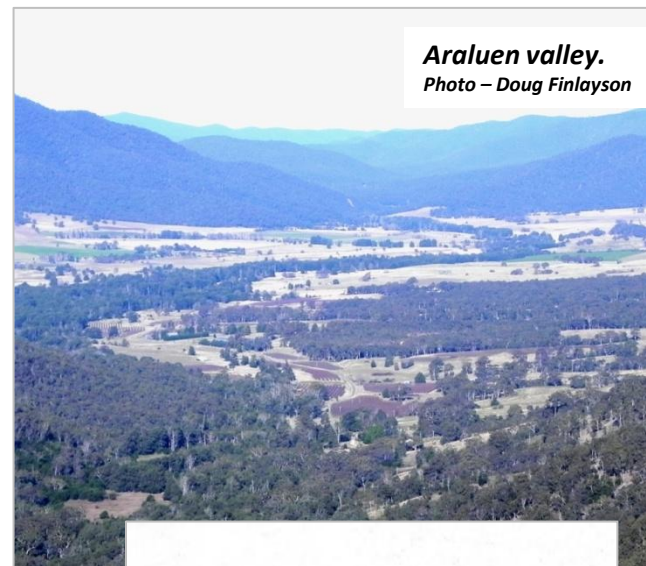


Araluen and Bells Creek (continued)

But by 1875 there were only three large stripping mines in the valley with about 500 miners in the whole valley, 40% Chinese. Strip mining was 6 metres deep in places. In 1884 Araluen recovered for a while with gold production of 4000 – 5000 oz. per year. In 1888 Araluen was the second largest goldfield in NSW. Then in 1898 very heavy rain stopped all work in the valley and damaged infrastructure. Strip mining never really started up again.

However, the **dredging boom hit Araluen in 1899** and for seven years the good times returned to Araluen. The goldfield was the largest dredging field in NSW and between 1900 and 1914 Araluen was never below 6th gold producing field in NSW. Public and private companies reported over 1700 oz per year. In 1913 there were 115 men employed on the dredges and many more employed in repair workshops and supplying wood to keep the steam engines working on dredges. The Araluen goldfields were productive until the 1920's and the last dredge closed down in 1932.

Araluen valley.
Photo – Doug Finlayson



Araluen dredge, 1900.
National Library of Australia



Geology of the Batemans Bay region

Gold mining

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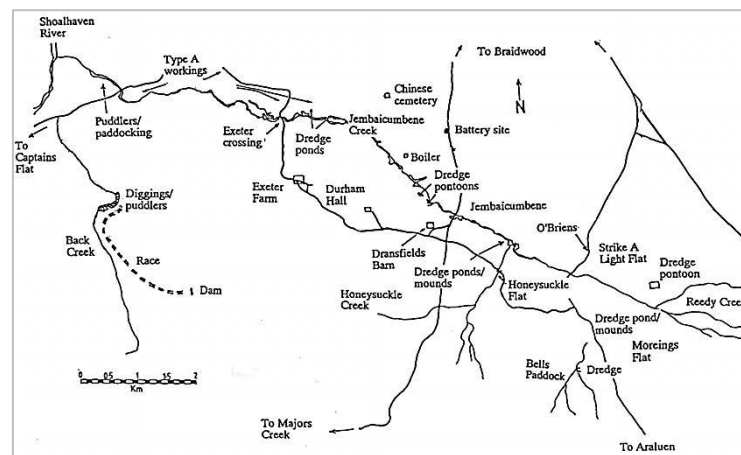
Braidwood

Only a brief description of selected gold mines around this town is presented here.

In the Braidwood area the principal gold mining was centred on **Jembaicumbene Creek** and the **Mongarlowe River**, both tributaries of the Shoalhaven River. Jembaicumbene Creek was one of the first areas to be mined in the Braidwood district following finds at Bells Creek. There are some references to diggings in Sept 1852 at Honeysuckle Flat where some 40-50 licenses were issued. The alluvial gold found there was reported as "very superior quality." There were about 200 workers in Oct 1852, with some miners getting 12-15 oz. per day. By end of year 1852 over 300 licenses had been issued. Good returns continued during 1853 with 30-40 oz. per week being average. Later that year over 800 licenses had been issued .

The Chinese arrived in 1859. By 1860 the diggings were all along the Creek right to the junction with the Shoalhaven River. There were some squabbles between the Chinese and land owners and European Miners. There were about 400-500 Chinese miners, about three times the number of Europeans. Their industry and working methods were acknowledged and admired.

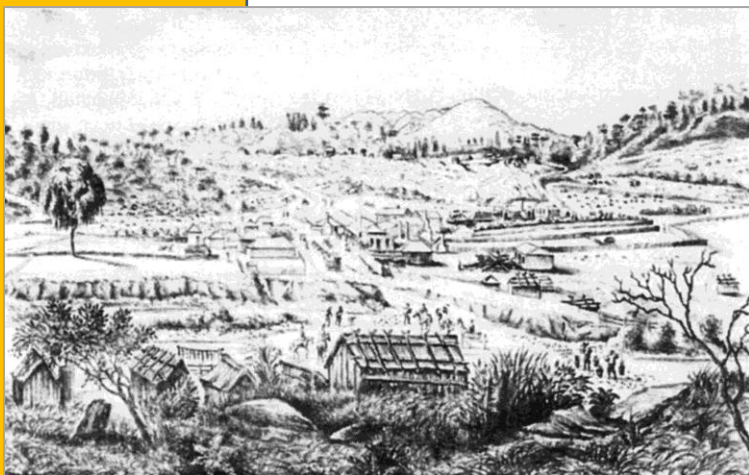
By 1898 many small claims were closing as large **dredging equipment** was moved in on large leases. The gold-bearing wash was over four metres deep in places. In the early 20th Century Jembaicumbene Creek was one of the largest dredging fields in NSW. Three dredges operated in the middle and lower Jembaicumbene Creek.



Braidwood (continued)

The **Mongarlowe (formerly Little River) goldfield** was extensive and among the earliest in NSW along with Araluen, Majors Creek and Jembaicumbene Creek. It stretched all along the whole of the Mongarlowe River. The gold mining started in early 1850's with alluvial mining, but then in the 1870's reef mining became more important through to the early 1900's.

The first gold find was in February 1852 when a prospector came to Braidwood after using a cradle to get 4-5 oz. of gold per day. By the end of 1852 eighty licenses had been issued. Nuggets as big a 2 oz. had been found. 100's of miners flocked to area and soon realised they had to quarry into banks of creek. Success was won from headlands, points, and creek tributaries rather than the bed of the Mongarlowe River itself. This success continued through to 1855.



Mongarlowe village
Illustrated Sydney News, 1870.

In 1858 about 400-500 Chinese arrived. They were very industrious. They built stone wall packing to control drainage and there methods mostly involved pan and cradle alluvial mining and ground sluicing. There is some evidence of tunnelling to access rich gold deposits. By 1870 there was a Chinese Temple or Joss House and a Chinese cemetery. At times there were over 1000 Chinese miners. In 1862 a 115 oz. nugget was found by a Chinese miner.

By 1869 reef mining had started with the construction of a stamp battery. It paid off. **Mosquito Reef** yielded 280 oz. of gold in its first crush. In some places shafts were 30 metres deep and water pumping was necessary. Eventually there were two stamp batteries on the goldfield.

In 1894 another stamp battery was opened at **Bobs Creek**. Mining continued until about 1935-36 when the financial Depression affected mining investment.

Geology of the Batemans Bay region

Gold mining

21

Stamp battery,
Francis Hill Mine.



Moruya

Only a brief description of selected gold mines around this town is presented here.

Moruya's major development period came with the discovery of gold in the Araluen valley in 1851 sixty kilometres up the Moruya River. However, there was also a significant mining industry near the town. In 1839 gold and silver had been reported by local families living near **Candoin Creek**. Eventually silver was discovered in Ordovician slate near the Moruya Tonalite outcrop about 4 km southwest of Moruya in the 1860's. In 1861 the Silver Mine was opened on Dwyers Creek, a tributary of Candoin Creek.

In 1864 some ore was sent for refining. The ore also contained lead, zinc and iron minerals that made it difficult to refine the silver. In 1864 120 ton was shipped to London for refining. Further test ore shipments were sent to South Australia. Neither silver returns justified the cost of shipping.

However mining continued with some success. In 1890 a 10-head stamp battery was built on the banks of **Dwyers Creek**. One mine shaft went to about 70 metres depth. A second shaft farther north went to about 45 metres. An open cut was also worked.



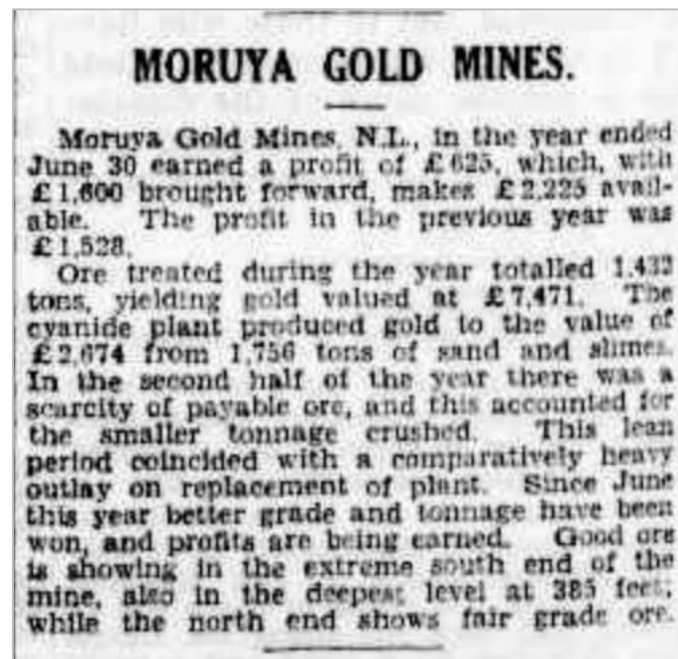
Moruya village
Illustrated Sydney News, 1866.



1939 press report

Moruya (continued)

The **Donkey Hill Mine** lies 5km southwest of Moruya. The workings comprise of shafts up to 170m and drives of unknown length. The largest vein dips southwest at 34 ° decreasing to 22 ° at depth. Originally taken up and worked in 1875(?), it was later held by the Moruya Gold Mines N.L. between 1933-46 and total recorded production was 423.799kg of gold, 80.362kg of silver, 2.03 tonnes of galena and 2.03 tonnes of arsenopyrite from about 20 320 tonnes of ore. The actual production is believed to have been considerably greater than that recorded. According to Mr. F. W. Booker (1950), rare molybdenite was also found in this deposit.



Approximately 1km east of the Donkey Hill workings is the **Francis Hill Mine**. Comprising of a quartz reef with a variable strike, the orebody was worked intermittently between 1899 to 1958 and produced a total of 15.861kg of gold from about 660 tonnes of ore. The gold was associated with arsenopyrite, galena and possibly silver.

During the 1870s and 1880s, about 0.930kg of alluvial fine gold was won by the Stevens brothers from **Spring Creek** and **Dwyers Creek**. The depth of sinking was between 2 and 4m.

Just south of the Francis Hill workings is the **Moruya Silver Mine**. The workings, comprising of shafts up to 70m deep, drives, adits and opencuts extend for about 1.3km along the strike. Between 1864-1901 and 1909, a total of 3 000 tonnes of ore yielded 77.750kg of gold, 311kg of silver and 40.6 tonnes of lead. These production figures were probably less than the actual production as large tonnages were sent to England for treatment.

*There's much more information on web sites and in books and journals.
Some of these are listed below.*

Books and publications

- ***Braidwood, Dear Braidwood*** by Netta Ellis, *Definitive history of Braidwood & District*, 214 pages, Published 1989.
- ***Braidwood Heritage*** by Netta Ellis , 72 Pages, Published 1983. Revised 1986. Reprinted 2012.
- ***Early Days – Braidwood District 1822-51***, 17 Pages. Published 1982. by Netta Ellis.
- ***History of Araluan*** by Lindsay & Roger Thwaites ,31 pages. Reprinted 2001.
- ***Mongarlowe & the Little River Goldfields*** by Bruce Russell, 86 pages, published 1989.
- ***Braidwood Gold Fields 1850-1860s*** Roslyn Maddrell, Published 1978, reprinted 1999.
- ***The Golden South*** by Barry McGowan. A history of the Araluen, Bells Creek, Majors Creek and Jembaicumbene Goldfields, 176 pages, published 2000.
- ***Dust & Dreams: Mining Communities in South-East New South Wales*** by Barry McGowan, published 2012, paperback, 381 pages .
- ***Memories of the Past*** by Brian McDonald, *Life in the village of Major's Creek over the past 60 years*, published 2004.

*There's much more information on web sites and in books and journals.
Some of these are listed below.*

Books and publications (continued)

- ***Majors Creek Memories*** by Ned Dunshea, 51 pages. Published 1997, Majors Creek Progress Association.
- ***Historic Mining Sites in the Monaro Southern Tablelands Districts of New South Wales*** by Barry McGowan, published 1993.
- ***Lost Mines: Historic Mining Sites in the Monaro-Southern Tablelands Districts of New South Wales*** by Barry McGowan, Published 1994.
- ***Bungonia to Braidwood: An Historical and Archaeological Account of the Shoalhaven and Mongarlow Goldfields*** by Barry McGowan, 293 pages, published 1996.
- ***Lost Mines Revisited: Historic Mining Communities of the Monaro, Southern Tablelands, and South West Slopes Districts of new South Wales*** by Barry McGowan, 236 pages, published 1996.
- ***Mining Sites in NSW: History and Heritage*** by Michael Pearson & Barry McGowan, 248 pages, published 2009.
- ***Historic Mining Sites Survey of the Shoalhaven and South West Slopes Districts of New South Wales*** by Barry McGowan, published 1995.

*There's much more information on web sites and in books and journals.
Some of these are listed below.*

Web sites

- **The Forgotten Gold Mines of Nelligen**
<http://www.southcoast.com.au/batemansbay/nelligengold/>
- **The Original Gold Rush, Mogo**
<http://www.goldrushcolony.com.au/>
- **Argyle County, Southern Tablelands of NSW**
<http://www.argylecounty.com.au/towns/araluen.html>
- **Majors Creek gold mining history, Unity Mining**
<http://www.unitymining.com.au/dargues-gold-mine-history/>
- **Majors Creek history**
<http://www.majorscreek.org.au/content/history>
- **Majors Creek mining history, Dept. of Primary Industries, NSW**
http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0008/109754/majors-creek-gold-deposits.pdf
- **Nerriga Gold Deposits, Dept. of Primary Industry, NSW**
http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0011/109775/nerriga-gold-deposits.pdf
- **Life on the Goldfields, Dept. Primary Industries, NSW**
http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/109898/life-on-the-goldfields-getting-there.pdf