13. Murray

The area comprises the district drained by the Murray River below the mountains of the Kosciusko Range. Typically this area was settled early by pastoralists (before 1848), and was much influenced by Victorian expansion. The Upper Murray district comprising Tumbarumba, Holbrook, Hume, Conargo and Culcairn, occupies a large part of the right bank of the River Murray. It includes a variety of land types, from the high ridges of the Alps in Tumbarumba, to the level plains of the Riverina. In the rugged area, land use is restricted to sheep and cattle. Some is included in the Kosciusko National Park. Peppermints, Alpine Ash and Black Sally predominate.

To the west are low hills of decreasing height, undulating to steep. Steep country flanks the Murray itself almost to Albury, making the Hume Weir a possibility. Red and White Box are the dominant trees. The hills give way to plains, with an imperceptible fall to the west. The timber resources become insignificant. Saltbush, and other shrubs such as Wilga and Kurrajong become important although much of the original saltbush has been destroyed by cultivation and overgrazing. Here wheat growing is the most significant rural industry.

To the west, plains continue to predominate, while red gum timber was formerly important along the waterways. This is chiefly a grassland plain, with patches of mallee appearing in the far west. Irrigation has been locally important, particularly in the Berriquin and Wakool irrigation areas. Wheat is grown in the eastern districts, but this is primarily a pastoral area: the western limit for wheat is in Conargo Shire.
LOCAL GOVERNMENT UNITS

CITY
Albury

MUNICIPALITY
Deniliquin

SHIREs
Berrigan, Corowa, Conargo, Jerilderie,
Hume, Murray,
Tumbarumba, Culcairn, Urana, Holbrook,
Wakool, Windura.
ABORIGINAL PEOPLE
The area lying between the Murrumbidgee and Murray Rivers seemed to settlers to constitute a well-defined entity: John Dunmore Lang coined the name Riverina on the specific South American analogy of provinces called 'entre rios' ['between the rivers'] and although the term has often been used subsequently for a more extensive area of New South Wales, the basic concept of an interfluval region bounded to the north and south by the two major rivers, to the west by the junction of the Murrumbidgee and the Murray and to the east by the mountains has remained powerful. [See Fig 12.1]

But even in European eyes, there are major deviations from this simple formula. In the Murrumbidgee heritage region, the local government units of Leeton, Narrandera, Wagga Wagga and Tumut all have land both north and south of the Murrumbidgee. The border between the heritage regions 12 and 13 lies approximately halfway between the Murrumbidgee and the Murray. The Murray itself is the border between the states of New South Wales and Victoria and therefore, unlike the Murrumbidgee, has constituted a major administrative boundary for Europeans for a century and a half.

The Aboriginal perception of the land was profoundly different. The major rivers were not in general boundaries between linguistic groups. Wiradjuri country lay on both sides of the Murrumbidgee, Bangerang country straddled the Murray from Albury in the east to Moama in the west and the Narinari occupied the drier country still further west. The only area where the Murray appears to have been a boundary between Aboriginal groups was east of Albury where the north side was Wiradjuri country, the south side Duduroa. The Murray heritage region was therefore divided into three Aboriginal areas, Wiradjuri on the higher rainfall area to the east, Bangerang in the middle and the Narinari to the west [Fig 13.1]; but the Wiradjuri also occupied large tracts of country to the north as far as the Macquarie River, whereas the Bangerang occupied large areas to the south of the Murray in modern Victoria. In the west both sides of the Murray were in the one linguistic area, on the east the river was a linguistic frontier.

The Bangerang used the river Murray as a thoroughfare and were famous for their bark canoes: the banks of the Murray today still have a relatively large number of older trees with the wood exposed where bark for canoes was cut out in the early nineteenth century or before. To the Bangerang the river fulfilled a function very similar to that of the Hawkesbury for early European settlers: as a major highway for communications and trade and as a major source of food. As late as 1848 the squatter E.M. Curr travelled on the river with an Aboriginal guide in a 6-metre long canoe with a traditional fire 'burning on a hearth of clay in the bows' to grill fish or duck en route.

The Bangerang found plentiful food, shellfish and Murray cod in the river and fruit, tubers and nuts in the adjacent country. Although they probably joined the Wiradjuri and the people of Monaro and the southern tableland at the annual feast on bogong moths in the alpine peaks each December and January, the Bangerang were less mobile than the highland folk and their activities seem to have concentrated on the Murray. Upstream from Corowa there is still a line of rocks running across the river, constituting a largely natural weir, uncovered in low water: this was developed and exploited by the Bangerang to make fish-spearing more efficient.

The dislocation by Europeans of normal Aboriginal routines of life was increasingly severe from the 1840s onwards, but already in the 1830s and probably earlier, European diseases, influenza, smallpox and syphilis, had taken a terrible toll of both Wiradjuri and Bangerang.

In 1845 the census of Aborigines in the Murrumbidgee Pastoral District, which included the Murray, estimated the total number as some two thousand. These were precisely located. Those in the Murray heritage region totalled six hundred: 100 at Thomas Mitchell's station of Mungabareena, later Albury [in Wiradjuri country]; 300 at the Gerapthana River, a tributary of the Edward River near Deniliquin, in the area where Bangerang and Narinari met; and 200 at Urana in the centre of Bangerang country.
The large middens along the river, on both banks, composed of black wood-ash and burnt clay from cooking, suggested that there had been in the past a higher density of population, although the lack of archaeological dating for the middens does not yet allow firmer conclusions. The largest midden described by Curr was 50 metres in circumference and over a metre high in the centre. But these were almost all deserted, often with trees sprouting from their centre. The middens cannot be quantified, because already in the 1840s Europeans were using them ‘as a makeshift for gravel’, but it was clear to a sympathetic observer like Curr that the population of 1200 Bangerang in his area in 1841 was already greatly reduced from the eighteenth century.

The effect of the European settlement was rapid and profound. Curr settled on the Victorian side of the Murray opposite the present New South Wales rail-halt of Moira: he tells how in the 1840s the surviving Bangerang ‘gave up in great measure their wholesome and exhilarating practices of hunting and fishing, and took to hanging about our huts in a miserable objectless frame of mind and underfed condition, begging and doing trifling services of any sort.’ By 1850, Curr believed that only some eighty Aborigines survived in the western Murray area.

Those who did not ‘hang about our huts’ established a considerable reputation as ‘scrub-riders and rough-riders’ in these activities the average Bangerang excelled the average [white] stockman.76

In this intermediate period in the 1840s and 1850s some traditional life still went on, particularly in the backblocks which were slow to attract European settlement. Corroborees continued and were drawn, in a European style, by Tommy McCrca, a stockman who lived in the Corowa area of New South Wales and in Wahgunya on the Victorian side of the Murray. [Fig. 13.2] But by the 1870s corroborees were primarily for the entertainment of settlers and groups of Bangerang moved around both north and south of the Murray mounting these paying spectacles.79

Urban Aborigines by the 1870s were encountering social problems. The Corowa Free Press thundered in its editorial of 14 April 1876 that the Aborigines ‘are a nuisance here and can well be dispensed with’. In the east the Wiradjuri were encountering similar problems deprived of their river resources, the men forced into employment on stations or to live in the new towns such as Albury, which still today has a substantial Wiradjuri population. The Wiradjuri and Bangerang women were forced to enter domestic service and become mothers of settlers’ children. In the twentieth century, among the Wiradjuri community at least, a high degree of marriage within the linguistic group, to the exclusion of other Aboriginal groups, has helped to restore and foster a sense of identity.

EARLY EUROPEAN DEVELOPMENT

After the exploration by Hume and Hovell in 1824, there was about a decade of delay before stock from the settled area in the nineteen counties was moved as far south as the Murray region. By 1838 the major route south from Gundagai to Port Phillip followed very much the line of the later Hume Highway through Tarcutta, Little Billabong, Holbrook, Woomargama, Mullengandra and Albury. The first settler in the Albury area, Charles Eddeh, took land on both sides of the Murray in 1835 and by the time of Butler’s map three years later [Fig 13.3] Thomas Mitchell had acquired Eddeh’s Mangabareena on the increasingly busy crossing of the Murray where Albury was established in 1839. To the north there were already in 1838 two large cattle- runs: Fowler’s at Mullengandra and Father Therry’s at Billabong.

To the west Charles Cropper’s Brocklesby station at Corowa opened in 1838 as a holding depot for his sheep travelling from Monaro to the Ovens valley in Victoria. Collendina, the neighbouring station to the west, was taken up in 1841 by Robert Brown from Albury.

In the 1840s an increasing number of newcomers came not from the north but from the south, from the pastoral districts of Victoria. By 1850 all desirable water frontages on both sides of the Murray had been taken up. Townsend’s survey of 1849 shows very vividly how river-bound these earliest properties were: from the junction of the Edward river with the Murray near Mathoura,
west to the area round Barham, the river was lined with squatting runs (Fig 13.4), while the open plain to the north was only notionally divided into undeveloped backblocks.

To the east of Albury, the upper Murray was settled in a similar way in the 1830s and 1840s by such as the Guise brothers at Jingellic or Reuben Sheather and William Guise at Khancoban.

The rivers of the plain had frontages no less attractive than the Murray, though more prone to drought: Benjamin Boyd, the notorious entrepreneur, had over 400,000 hectares round the Edward River at Deniliquin in the 1840s, stocked from Victoria. The Billabong Creek, running west across the plain from Bulgandry to join the Edward River near Moulamein, was fully divided with runs of 20,000 to 40,000 hectares very common, though the Osbornes’ Brookong run at Urana covered 112,000 hectares, straddling two heritage regions. The runs around Albury were more closely settled with the normal size of runs some 10,000 hectares.

In the mid-1840s, there were throughout this region ‘converging streams of settlers moving down the Lachlan, Murrumbidgee, Billabong and Murray Rivers’,62 and an increasing number moving north from Victoria. There was a preponderance of cattle over sheep and the stock was primarily being fattened en route to the Victorian market. In the western area the potential of the saltbush out on the backblocks was not understood (certainly not fulfilled) in the 1840s and 1850s: since saltbush is particularly suitable for sheep, this inhibited the size of flocks and delayed a major wool industry.

FEEDING THE GOLDMINERS

In the 1850s the goldrushes in Victoria and New South Wales greatly increased the demand for beef and mutton: the Murray region was particularly encouraged by the opening of the Ovens goldfields immediately to the south in 1852. The foundation of South Australia in 1836 and the growth of Port Phillip in the 1840s had already given a steady market: now the great increase in rural population created by the goldrushes promised a spectacular increase in the meat market. The Murray graziers responded primarily by increasing cattle numbers: in the entire Murrumbidgee Pastoral District [including the Murray] sheep declined in number by about one third between 1850 and 1859, while cattle increased two and a half fold to 323,000. The total area grazed by sheep [on the basis that six sheep occupy the pasture needed by one steer] was by 1859 only one third that dedicated to cattle. To control breeding and make handling of stock easier, graziers invested heavily in fencing in these years of high demand for beef. It is in the 1850s that the big stations on the flat plains are partitioned into paddocks and that the backblocks are exploited for the first time. As the Pastoral Times remarked in 1859:

> The chief part of this country lying between the Murray and Murrumbidgee will soon be a mass of gigantic paddocks enclosed by strong fences to prevent the escape of stock placed therein for fattening. At least all the cattle runs will soon be enclosed by strong post and rail fences.81

These ‘strong post and rail fences’ were increasingly changed to wire in the 1860s as a new profession of fencing contractor took a prominent position in rural areas.

As a result a property like Brookong, at Urana, which had had one paddock covering 45,000 hectares in 1850 had by 1871 twelve paddocks each of 10,000 hectares, divided by wire fences.82

The long-distance drovers were affected by the new demarcations. In the 1840s the traditional kilometre-wide stock route could easily expand sideways in unfenced country. Banjo Paterson made the classic statement of this Riverina norm in ‘Saltbush Bill’:

> And the drovers keep to a half-mile track
> on the runs where the grass is dead
> But they spread their sheep on a well-grassed run
> till they go with a two-mile spread.

This legitimate aspiration was much curtailed by the fencing of the paddocks adjacent to the stock routes.
Because of the pressure on country away from reliable water frontages, there was a precocious interest in irrigation. The Yanko canal, opened in 1856 and developed in the 1860s, was built to improve water flow in the creeks between the Murrumbidgee and Billabong Creek north of Jerilderie. The Billabong Creek itself, which is one of the key sources of water, running parallel to the Murray, along the whole western part of the region, was dammed by several aggressive pastoralists, such as Desailly at Coree, creating local bitterness and some violence. Wells and tanks were sunk in the backblocks; pumps were used for small-scale water movement. Some of all this development was in Trollope’s mind, as well as the Euphrates-Murray, when he described the Riverina as the ‘Mesopotamia of New South Wales.’

WOOL
The huge tracts of country away from the rivers and creeks were opened up more comprehensively in the 1860s when interest throughout New South Wales but most of all in the Riverina turned away from cattle and concentrated on sheep and the wool clip. In the Murray region this was precipitated in 1860-61 by a fall in beef prices (reflected in the creation of boiling-downs, to turn surplus stock into tallow), by a serious outbreak of pleuro-pneumonia among cattle, spreading from Victoria, and by the rise of the riverboat trade (begun only in 1853) to carry wool bales more economically to Victoria, South Australia and overseas markets. From then on, the sheep is the dominant factor in Murray pastoralism, as reflected in the rich heritage of great shearing sheds dating from the later colonial period.

New owners and new settlers changed the order of things throughout the Murray region in the 1870s. Many of the early leases expired in 1866 and, after some bad seasons, ‘the seventies, by contrast, opened with good seasons and high wool prices, encouraging men to seek a stake in the land once more. Surplus population spilled into the Riverina from Victoria and to a lesser extent from the older settled areas of New South Wales. High wool prices may have lured men on to the Riverina, population pressure may have pushed them from below, but free selection enabled them to stay.’ And this was very attractive to Victorians and to Germans from South Australia.

The last quarter of the nineteenth century saw therefore an increase in the number of pastoralists, a reduction in the general size of holdings, the increased sinking of deep wells to water backblocks and the complementary increase in the population of the service towns throughout the region. Between 1860 and 1890 the population increased by 600%. As a result there was an intense struggle for land, whether rural or urban and, as Jon Winston-Gregson has shown for Hillside and Little Billabong in Holbrook shire, there were also small nucleated communities which were not viable service centres but which arose out of the severe pressure put on many small free selectors by the larger graziers. (Fig 13.5)

URBAN DEVELOPMENT
The towns of the Murray region all took their municipal shape in this period. Albury, the senior and always most important, was surveyed in 1838 and gazetted in the following year. By 1848 Albury was still of modest size, with a population of 654 and only twelve houses. Eleven years later it was a thriving town with municipal status and a significant newspaper, the Border Post, the first in the Murray region. By 1866 it had also the Albury Banner and Wodonga Express and ten hotels. It was surrounded by 20,000 hectares of agricultural land held in small selections: the Border Post Almanacs of the 1870s and 1880s are full of advice to agriculturists and gardeners, with advertisements from all the flourmills in the eastern Riverina.

Many of the lesser towns grew up as crossing places on the Murray: Corowa developed in the 1850s as a crossing place, but immediately developed a wharf for the new steamboat trade in 1854. When the surveyor recommended town status in 1858, he argued that it possesses abundant wharf frontage to a deep portion of the river, with a sufficient breadth of river to turn any steamer now trading or likely to trade upon it. Moama grew up opposite Echuca, the largest inland port in Australia, and shared in its Victorian neighbour’s spectacular success between 1860 and 1900. As a local teacher observed in 1880,
All business here is transacted with Echuca: the residents of Moama attend Echuca churches, consult Echuca medical men and lawyers, employ Echuca agents, are served by butchers and bakers from Echuca, and purchase all their groceries and household requisites in this place. In fact Moama, though in New South Wales, is merely a suburb of Echuca.\(^7\)

The inland crossing places also became towns. Deniliquin started in 1850, becoming a major stock-selling centre in the 1860s and benefiting from a railway to Echuca in 1876. Moulamein was laid out in allotments in 1851 on its strategic position at the junction of Edward River and Billabong Creek, a changing post for Cobb and Co coaches in the 1870s, but, without agriculture, without a railway, without industry to assist, it faded away until its resurgence after 1926. Urania developed in the mid-1860s as a crossroads on drove routes, converging from Corowa to the south, Jerilderie to the west, Narrandera to the north and Wagga Wagga to the northeast. Walbundrie was laid out as a village at much the same time, in 1863, as a useful reserve for travelling stock, but with new selectors, including a group of German settlers, in the 1870s, it began to service a more populous local world as well as controlling an important bridge over Billabong Creek.

In the east part of the region, Holbrook had become a centre for quite intensive agriculture, with a significant concentration of German settlers: when the first land sales took place in 1858, the village was known as 'The Germans', officially changed to Germantown in 1876.

**AGRICULTURE**

All of these towns, and other settlements, served agricultural farms as well as grazing properties and profited from their needs. While sheep increased in number a dozenfold between 1861 and 1891, the area under crop increased even more from 8,200 to 80,000 hectares in the same period in the Murrumbidgee and Murray regions combined. The Deniliquin, Moulamein and Moama police districts combined had less than 400 hectares under crop up to 1864, and still in 1873 had only 800 hectares sown, but thereafter there was an exponential surge in wheat production, reaching 4,301 hectares by 1878, 9,000 by 1884 and 14,000 by 1889. Similar developments occurred in the east, north of Albury, when the hectares under crop tripled between 1869 and 1889 from 8,600 to 25,000.

The western, dryer lands were more vulnerable. Deniliquin lies on the fringe of marginal wheat land, where climatic risk is high and yields vary greatly because of drought frequency.\(^4\) The output and area under crop continued high in the west in the first three decades of the twentieth century, but agriculture was always less important than pastoralism on the saltbush plains.

**IRRIGATION**

All this was modified by irrigation. The small size of the agricultural holdings and the emphasis upon wheat rather than livestock created a demand for manmade water channels to assist in stabilising production:

Greatly impressed by the success [despite initial setbacks] of the fruit settlements of the Chaffey at Mildura and Renmark. State Governments in south-eastern Australia implemented a policy of establishing numerous closely-knit irrigation communities of family farms producing for a distant market. By these means, the frontiers of intensive farming were carried from the humid and sub-humid lands out on to the semi-arid and dry sub-humid interior riverina plains and Mallee country of the southern Murray Basin.\(^5\)

The fundamental engineering work was the creation of the Hume Reservoir, damming the Murray upstream from Albury. The agreement of New South Wales, Victoria and South Australia and the support of the Federal government made the Hume Dam a reality, but with very deliberate speed. A conference at Corowa in 1902 led in 1911 to the appointment of engineers who reported in 1913; legislation was passed in all states in 1916-17 and 'the first sod of the greatest water conservation project in Australia'\(^6\) was turned by the governor-general in 1919. In 1921 the quarrying plant was erected and a weatherboard village for workmen sprang into life. In 1925 it
was decided to generate electricity as well. In 1927 the spillway was partly finished and in 1936 the first stage was completed only seventeen years after its commencement. In the 1930s, therefore, irrigation water became available at last.

The form of irrigated farms in the Murray region is very different from the Murrumbidgee. In the Murray region, there was very little intensive, total irrigation of the sort familiar around Leeton and Griffith. Instead the first Irrigation Districts, the Wakool and Berriquin, which opened in 1935 and 1938 respectively, were extensive and 

partial. Instead of the government resuming large pastoral properties, the aim in the Wakool and Berriquin Districts was 'to spread water on large areas of country, without property resumption to provide the maximum number of existing settlers with enough water to irrigate a small portion (initially an average of one-tenth) of their commanded and suitable lands.'

Instead of fruit for canning or grapes for wine, the western Murray region was irrigated primarily to ensure a regular supply of fattened lambs: land-use was not made more intensive but the farmer was better insured against drought. The term Irrigation District is in contrast to Irrigation Area: an Area is resumed and redistributed land, a District is simply an existing district with its existing farms and farmers.

The change in cropping came in the 1940s when rice-growing began. In 1949 Tallukool Irrigation Area within the boundary of the Wakool Irrigation District was resumed and redistributed to 24 soldier settlers specifically to grow rice. In the same year the Denielmud Irrigation District northwest of Deniliquin received its first water and the large Deniboota Irrigation District to the southwest opened in the 1950s. Now rice is so important a crop that there is a ricegrowers' cooperative mill in Deniliquin. [Fig 13.7]

Although the farming life in the whole western half of the region has been diversified and made more secure by an irrigated water supply, the ecological effects have been more profound than the flooding caused by the Hume Dam on the Murray and the Stevens Weir on the Edward River. The salinity on the plain has been rising alarmingly, because the watertable has been rising, as much as 25 metres in the last 25 years. The excess water from the rice paddies and from winter rain is now being diverted to the river in a new surface drainage programme designed basically to get rid of the water so expensively brought to the Irrigation District in the first place. In the 1970s the salting of the soil was particularly acute in the central part of the Wakool Irrigation District. The result was dead trees, then 'the disappearance of clovers from pastures, then the death of rye grasses with either invasion by such species as barley grass and finally scattered plants of halophytes or complete denudation.'

GOLD
Minerals have not played a large role in the Murray region. Goldrushes have been restricted affairs and success has been modest.

Reefs were identified in 1855 at Bulgaundry, 70 kilometres northwest of Albury, and mining went on intermittently for an initial forty years. In 1896 Bulgaundry was still a small mining town: its Working Man's Club had 100 members, there was a public school under construction, 'a commodious hotel' and an eight-head stamp battery. In 1898 a new reef was discovered, new shafts were sunk, new miners came, the Working Man's Club had 250 members, the eight-head battery gained two heads and a new five-head battery was erected. But the expectations were not fulfilled and Bulgaundry quietly declined: the soldier settlers on the former Bulgaundry station in the 1920s did not save the town and when Rand was created on the railway six kilometres away in 1926 Bulgaundry withered to a mere three houses.

To the south, at Albury, there was some goldmining between 1860 and 1865, on the Black Range and after 1863 on Nail Can Hill. The Black Range area, north of the town, had been unsuccessfully explored in 1851, but 200 Chinese and some Europeans found both alluvial and reef gold. As Dr Andrews laconically remarked in 1912, 'from that time "fossicking" has always been carried on, whenever water was available, but no fortunes have ever been gathered there.' Nor was any fortune made from Portuguese Gully to the northwest.
In October 1863 a new rush began on Nail Can Hill, in North Albury. The reef was mined off and on. In 1881 a new company found a new reef and work continued until the late 1890s. The site has been neglected in the twentieth century but is now publicised by the Lands Office's Nail Can Hill walking track.

Further down the Murray, at Corowa, there had been hopeful enquiry ever since the Rutherford goldfield in Victoria found such good deep leads in the 1860s: did these leads go under the Murray and under Corowa? A shaft was optimistically sunk at Corowa in 1876 but nothing really happened until 1892. Then there was a rush to Quat Quatta station just to the east, with many Chinese arriving and then, as Quat Quatta failed, eleven bores were sunk in 1893-94 at Corowa itself. An optimistic eight-head stamp battery was erected and in 1897 the Corowa Deep Lead Co brought in machinery, sank two shafts in 1900 and collapsed in 1904. A syndicate opened the well-named Corowa Perseverance mine in 1916 but closed the mine in 1919, while a final shaft sunk in 1930 was flooded by seepage before 1931 was out. Although a fair amount of mess was created, few profits were made, even by the Chinese. In 1932 in the final throes of gold fever a company went back to the alluvial field at Quat Quatta and installed a dredge but this too failed.

In Tumbarumba shire on the northeast edge of the region there was a long history of gold winning, both alluvial and shaft. The area from Tumbarumba north along Tumbarumba Creek extended to Laurel Hill and constituted part of a wide goldfield area encompassing Adelong and Batlow in the Murrumbidgee heritage region and Kiandra in Monaro.

Gold was first discovered near Tumbarumba in 1855 and for the next few years a highly mobile mining community explored the adjacent area. J.L. Willis has noted how 'the town of Tumbarumba virtually had no fixed location. It followed the gold miners as they moved down Tumbarumba Creek working the alluvial gold.'785 The town finally settled down on its present site in the mid-1860s, at the most southerly point of the goldfield.

The deep lead running north from Tumbarumba was exploited by shaft mining from 1856 until 1937 but very little gold was extracted after 1884, despite the floating of some companies over the next twenty years and a flurry of unsuccessful activity in 1935-37 on the Yarrara and Nevada reefs. Reef mining was never more profitable than alluvial mining, though in the late 1870s the quantity of gold extracted from the quartz approached the total alluvial gold recorded. Thereafter alluvial gold maintained a complete dominance. More than 1,000 oz of alluvial gold were obtained from Tumbarumba Creek and its tributaries in every year from 1889 until 1906 and declined only after 1910 to nothing at all in 1919-21, but revived from 1922 until 1926 and again in the early 1930s.

After the technique of dredging was introduced from New Zealand in 1899, dredges were extensively used on the creeks from 1900 until 1916, producing more than 1000 oz in each of the years from 1903 to 1907. Only one bucket dredge was employed on this field: all the others, operated by the Burra Sluicing Co, the Union Jack Gold Mining Co and some individuals such as the Heineckes, J.J. Donaldson and M.D. Bennet, all operated by pumping and by hydraulic jack elevators.

CONCLUSION
The Murray has relied heavily on the graziers. The area first developed as a holding paddock for stock moving south to Victorian markets. In the 1850s the goldrush population created a market for beef which encouraged cattle breeding, but in the 1860s cattle disease and low prices for beef led pastoralists to concentrate more on sheep and fine Merino wool became the dominant feature, commemorated in the Peppin Merino Stud Memorial at Wanganella and perpetuated at studs such as Boonoke near Conargo. With a vigorous steamboat trade on the Murray after the mid-1850s and a rail link to Melbourne via Echuca, the wool clip was assured of easy transport to its markets. In the period from 1870 onwards, with closer settlement, grain production became increasingly important and in the last sixty years irrigation channels to assist farmers on the drier lands in the west have both increased wool
production and diversified cropping with a heavy price to pay in increasing salination around the Wakool. Only at Tumbarumba has gold-mining attained a position of any significance.

74 E.M. Curr Recollections of squatting in Victoria, then called the Port Phillip district (from 1841 to 1851). Melbourne, 1883, 173.
75 Historical Records of Australia, 1st series, 24, 1925, 268.
76 Curr, op.cit. 237.
77 Ibid, 235.
78 Ibid, 290.
81 Ibid, 38, quoting two issues of Pastoral Times, 1859 (precise references not given).
84 Buxton, op.cit. 286.
86 Quoted in Burton, op.cit, 36.
87 Quoted in Helen Coulson Echuca-Moama, Murray River neighbours. Wangaratta, 1979, 47.
89 John Rutherford, "Integration of irrigation and dryland farming in the southern Murray basin, part 1", Review of Marketing and Agricultural Economics 26, 1958, 237.
90 Albury Banner and Wodonga Express, 5 December 1919, quoted in K.J. Swann Fifty Years at the Hume Reservoir. Wagga Wagga, 1969.
91 Rutherford, op.cit, 238.
93 Quoted from Border Post in Williams, Walbundrie, 35.
FIGURE 13.1. THE APPROXIMATE LOCATIONS OF THE THREE ABORIGINAL GROUPS IN THE MURRAY REGION

The Wiradjuri to the east, the Bangerang in the middle (straddling the river Murray) and the Narinari in the west.
FIGURE 13.2. DRAWING BY THE ABORIGINAL ARTIST TOMMY MCCRAE OF COROWA AND WAHGUNYAH (D. 1901)

Showing a corroboree of the Bangerang people and, at centre top, a traditional scene of the pursuit of a possum up a tree. The axe in the hunter’s hand seems, however, to be European.

An explanatory version is on the right. The northern boundary of the Murray heritage region lies between Billabong and Kyeamba.

Helen Coulson’s plan of the same area showing the underdeveloped backblocks.

Surveyor Townsend’s map of the Murray runs from Mathoora westwards in 1849.

FIGURE 13.5 HILLSIDE, 1866-86

The constriction of the free selectors (hatched) by the two large graziers, Ross and Manning.


14. South Coast

There is no continuous coastal plain; rather a series of valleys containing settlement separated by ridges and plateaux of wooded country. While spurs from the plateaux reach the coast, most of the higher land has been eroded to a low level. There is much high and rugged country separating the coastal valleys from the plateau of Monaro which is reached by the Brown Mountain road.

River basins extend from Batemans Bay to Cape Howe, and are smaller than equivalent valleys on the north coast, though the Bega Valley is of considerable size. Small harbours string the coastline: Batemans Bay, Tuross, Narooma, Eden. The Bega Valley port was at Tathra Wharf. Settlement came chiefly from the sea, or by movement down from Monaro.

While small patches of rainforest exist, this has not been an important resource. Otherwise, eucalypt forest has been of great importance in fostering a timber industry, notably Messmate, Blackbutt, Grey Gum and White Ash. There are significant wetlands.

Dominant land use has been dairying, with cheese manufacture particularly important in this region, though more butter than cheese was always made. Pigs, maize and sorghum have also been important, as has fishing.
ABORIGINAL PEOPLE

The south coast offered abundant food supplies both from the sea and the land. The valleys of the Moruya, Tuross, Bega and Towamba rivers were divided by dauntingly steep forested hills and formed natural drainage basins. The western boundary of these basins was the watershed of the great Dividing Range.

This coastal area was occupied by a fairly high density of Aborigines, the characteristic ‘Katungal’ as opposed to inland and mountain dwellers. The drainage basins of the Towamba and Bega Rivers were precisely the territories of the Taua and Dijirringan groups respectively, and in the north of the region the Walbanga occupied the whole of the valleys north of the Tuross and the Moruya rivers. The only parts where drainage basin did not coincide with occupation by a single Aboriginal group were the two parallel basins north of Batemans Bay, where the Wandandan and Walbanga border seems to have cut right across the basins from east to west [Fig 14.1]. Essentially, however, there were four main waterways with their valleys and tributary systems, and there were three Aboriginal groups, one of them occupying two natural basins. All of them were hemmed in by the mountains to the west and, although they joined with inland Aborigines in periodic meetings, were characteristically coastal in their lifestyle.6

The density of population was almost certainly higher than on the tablelands and inland plains. Two archaeologists, Phil Hughes and Ron Lampert, have concluded that over the 5000 years before 1788 there was ‘a progressive increase in the number of sites becoming archaeologically visible [two to three fold] and an increase in intensity of occupation of those sites already visible [six to ten fold].’ Hughes and Lampert were assessing sites from as far north as Sydney down to the south coast but the more detailed identification of Aboriginal sites from Durras Lake (just north of Batemans Bay) down to Bermagui undertaken by Margery Sullivan has shown a very high incidence of coastal occupation round Batemans Bay, on the Tomago estuary, in the kinks of the Moruya River, around Tuross Lake and Heads, and on the coast between Dalmeny and Bermagui (Fig 14.2).6

Because of their relatively small traditional lands and the regularity of food supplies, these people of the south coast were much less mobile than Aborigines of the interior regions away from major rivers. Nonetheless when George Bass explored Tuross Lake in 1797 he did not see a single Aborigine, because they had all prudently gone off southwest to the Bodalla area. The first contact between Europeans and Aborigines on the south coast was in 1798 when Matthew Flinders landed at Snug Cove in Twofold Bay [the site of Eden] and had an amiable exchange of snacks with a middle-aged Aboriginal man. Flinders gave the Aborigine a ship’s biscuit and received in return a piece of whale fat: ‘this I tasted’, Flinders confided to his log, ‘but watching an opportunity to spit it out when he should not be looking, I perceived him doing precisely the same thing with our biscuit, whose taste was probably no more agreeable to him than his whale was to me.’5

Subsequent meetings between the local people and Europeans less intelligent than Flinders led to violence at Snug Cove in 1803 and Batemans Bay in 1808 and 1821. As the cattlemen began to bring their herds south in the later 1820s and established permanent settlement in the more favourable sites through the 1830s and 1840s, the Aborigines’ coastal life was increasingly disturbed and their foodways disrupted. Disease took its usual toll, though when John Harper met a group of 146 Aborigines at Batemans Bay in 1826, he regarded them as not yet ‘contaminated’.6 The 1844 census shows a population of 535 with a high concentration in the Bega Valley: only 34 were counted around Moruya, 69 in the stretch of coast from Narooma to Murrah (below Bermagui), 82 at Twofold Bay and 19 at Pambula. On the other hand births were balancing deaths and the Aboriginal population was reported to be quite stable in the mid-1840s.101

Censuses are uncertain things. At the time that John Lambie was counting only 34 Aborigines at Moruya, the first newcomer girl there thought that ‘the Aborigines numbered about four hundred. There were no other white children but my brother and myself, and we used to play with the blacks, and were never frightened by them.’102 But as Celia Ann grew up in Moruya and became Mrs Rose, she saw the first hotel constructed: in
her extreme old age, she naively recalled that 'when the blacks got drunk there they would fight and kill each other, and now [1923] there is not one full-blooded black left in the district.'

In the 1840s many of the Aboriginal men worked at sheep washing and as agricultural labourers, while the womenfolk worked as domestic servants and too often bore settlers' children. The steady disintegration of traditional society was completed by the more intensive European exploitation of all the best land and all the best fishing in the mid-colonial period. In one European industry, however, the Aboriginal people played a significant role: throughout the main whaling period from the 1830s until 1920, Aboriginal men constituted a reliable, able and essential pool of labour for the whaling stations of Twofold Bay. Such economic assimilation did nothing to abate the disruption of their traditional lifeways, and the incidence of syphilis was very high, but the excellent relations between Aborigines and Europeans in the whaling industry did mean that the local groups escaped the decimation which accompanied the progress of the pastoral frontier and enabled a certain continuity of traditional culture and social structure to be maintained.

An archaeological challenge is presented by the lack of written evidence about the material culture of these Aboriginal whalers and the Aboriginal women who lived with the European whalers at the same sites. Twofold Bay has quite exceptional potential as evidence for the acculturation of Aboriginal life-styles and technology in an unusual and specialised environment.

**WHALING**

The whaling stations of Twofold Bay constitute one of the principal heritage resources of the south coast. They are exceptional in three ways: their continuous existence for over a century; the assimilation of Aborigines into the introduced workforce; and the integration of whaling with conventional agriculture and pastoralism. At the same time, the whaling operations are part and parcel of a universal nineteenth-century industry. Throughout the Pacific, from Tasmania, New Zealand, Norfolk Island and California, in the Atlantic from the West Indies and New England, and in the Indian Ocean from South Africa, open boats ventured out from land-based stations to harpoon whales, tow them back to land and there render down the blubber into oil.

Clearly the Aborigines of Twofold Bay were already familiar with whales in the eighteenth century, although they may perhaps only have eaten ones cast ashore. The Aborigine who gave Matthew Flinders a piece of whale gristle in 1798 committed a prophetic act quite unwittingly. Whaling in the colonies was discouraged by heavy British tariffs until 1823 and, although there were stations in Tasmania during the tariff period, the Australian mainland industry began in Twofold Bay in 1828. Thomas Raine's enterprise lasted only three months in 1828 but whaling continued on an ad hoc basis and in 1834 the Imlay brothers began the really significant operations in the bay.

Alexander, George and Peter Imlay had in the years 1832 to 1835 established a large pastoral enterprise right down the south coast from Bega in the north to Cape Howe on the Victorian border. To the Imlays whaling was only one aspect of a diversified economy. They had their own ships and also used William Walker, the major Scottish shipping firm in Sydney, as their agents. These coastal ships transferred cattle, beef, tallow, horses, wool, wattle bark for tanning, whale oil and whalebone from Eden to Sydney right through the Imlay period, which ended in 1847.

Unlike Tasmanian stations, which seem to have overkilled the whale population, Twofold Bay continued to expand its whaling business up to the late 1840s. The flamboyant entrepreneur Ben Boyd created a whaling station in 1842-43 as part of his grand scheme to have his own coastal base for shipping out his wool and cattle from the million hectares of pastoral land he held in the Murrumbidgee and Monaro regions. Boyd's famous whaling station at East Boyd Bay was therefore, like the Imlays works, a cog in a much bigger wheel.

Despite the falling numbers of whales in the area and exacerbating the decline, two other whaling stations opened in East Boyd Bay just south of Ben Boyd's: one was owned by the Imlays, the
other by Barclay and Faulkner. Competition was intense and a high lookout point was needed. The Imlays had a very successful tower on Lookout Point at Eden and Boyd constructed one on Honeysuckle Point north of East Boyd Bay, but the famous surviving tower was farther east at Red Point: this impressive sandstone tower was conceived in 1847 as a lighthouse but because the light could not be maintained constantly Boyd was obliged to use the building as a lookout only in the brief period before the collapse of his business empire in 1848-49.

To intercept the whales as they migrated northwards, George Imlay established two whaling stations [without an oil-processing plant] farther south at Mowarry and Bittangabee (Fig 14.3). This reflected the keenness of competition in the early 1840s: the surviving stone building, begun in 1844 at Bittangabee, suggests that Imlay was contemplating a full-scale whaling station there but the recession created general problems for the Imlay brothers and the building was not completed. Boyd then gained control of both Mowarry and Bittangabee in 1847-48, but the decline in whaling was not arrested.

In East Boyd Bay only the Barclay and Faulkner station survived and did not close until the 1870s. The Walker firm of Sydney and a man called Solomon seem to have continued the Imlay station at Eden into the 1860s and a new station on an entirely new site was opened about 1861. This was Alexander Davidson's station on the east side of Kiah Inlet on Twofold Bay (Fig 14.3). Davidson’s station had a remarkably long history: utilising Boyd’s stone tower on Red Point and employing largely Aboriginal crews, Davidson continued open-boat bay-whaling up to 1929, together with a traditional try-works for boiling-down the blubber. This last of the old-style whaling stations is vividly described by a well-informed eyewitness, W.J. Dakin in his Whalmen Adventurers.165

The historical and evidential importance of the archaeological sites on East Boyd Bay, in Kiah Inlet, at Mowarry and at Bittangabee deserves equal recognition, not least for the unique information archaeology can give on the lifestyle of the Aboriginal whalers.

EUROPEAN LAND SETTLEMENT

As elsewhere to the south of the limits of location, the south coast attracted settlers from the 1830s onwards seeking new, free pastures for their cattle and sheep. The first pastoral runs in Moruya were taken up in 1828 and 1829, although initially overseers and a few stockmen were the only residents. The first owner-occupiers came in 1829-30, with Francis Flanagan at Mullenderra and John Hawdon on the Moruya River (where his 1835 cottage still stands). These settlers had come from the north. An increasing number came from the Braidwood district to the west, especially after the major drought there in 1833. Well-known Braidwood families such as Elrington and Tarlinton established coastal runs near Cobargo, while the Imlay brothers from Tasmania acquired large pastoral runs from Twofold Bay south.

Settlement was patchy because of the rugged nature of the country which separated the river valleys.

Within the Bega Valley the new settlers, principally from Braidwood, found the open savannah-woodland fed by apparently reliable mountain streams very attractive for sheep-grazing: the critical advantages were good water and natural grassland. The settlers from Braidwood and the Imlays from Tasmania met by 1834 in the area south of Bega. The Imlays and their associates, the Walkers, had turned Towamba valley to the south of Eden into a well-stocked cattle and sheep run; in the north, in Bega Valley, they began to develop Kameruka, the most potent of all the south coast properties.

All this became regularised after 1846 when the new County of Auckland was proclaimed, extending from the Brogo River in the north down to the Victorian border. When the county was declared there were only a thousand people in the area. In Bruce Ryan’s words, still in 1850

the cultural landscape of the Far South Coast consisted of little more than Eden, the ghost of Boydtown, ridge-top bridle tracks, clusters of shepherds’ huts on a few hilltops, some wheat fields associated with the Bega homesteads, and the occasional stockyard and stone-walled sheepfold.166
Over this undeveloped landscape the Scottish Walkers hunted native dingoes and imported foxes with their packs of imported hounds.

PASTORAL DEVELOPMENTS
The creation of the Twofold Bay Pastoral Association brought substantial Sydney investment to the south coast after 1852. Consisting of three Mannings, two Tooths, John Croft and Thomas Sutcliffe Mort, the Twofold Bay Pastoral Association gradually bought all the Imlay-Walker holdings on the south coast and began the consolidation of Kameruka. (Fig 14.4)

The Association was dissolved in 1860, but individual members retained critically important parts of the land: Thomas Sutcliffe Mort transferred his interests north to the Tuross valley where he acquired Bodalla from John Hawdon, but the Mannings and the Tooths dominated Bega Valley and Towamba Valley. The Mannings soon sold out to the Tooths and by 1864, Robert Lucas Tooth was the leading figure in establishing pastoral policy on the far south coast. Tooth, like his uncle Frederick Tooth from whom he acquired Kameruka in 1864, had the massive capital of the Sydney breweries behind him and over the rest of the nineteenth century the deeply held ideology of the Tooth family left a lasting impression of Kameruka, just as Mort’s beliefs did at Bodalla and Comerang. These properties were created by a characteristic mid-nineteenth century vision of social ideals, humanitarian absentee landlordism and landscape gardening.

LANDSCAPING
Exotic grasses were planted at both Kameruka and Bodalla in the 1860s and 1870s. At Comerang Mort insisted that no trees should be ring-barked but that substantial groves of trees for summer shade should stand in every paddock: clearing was done by removing trees down to the roots and replanting of grass was carefully done. At Kameruka, Robert Lucas Tooth surrounded the attractive Walker homestead ‘with English laurels, Chinese elms, firs, oaks, cypresses, bunya-bunya, acacias and ornamental shrubs.” The ideological commitment to well-housed tenant farmers created at Kameruka six-roomed slab cottages (replaced by weatherboard in 1911) and at Bodalla and Comerang well-ordered farmhouses full of tenants hand-picked by Thomas Mort. Hawthorn hedges became a hallmark of Kameruka. The planned village of Bodalla with its public hall, reading room with improving books, company office, bakery, store, smithy and company carpenter’s shop signalied lacked an inn until Mort in 1874 was obliged to withdraw his total ban on liquor.

DAIRYING
All this physical manifestation of social engineering was accompanied by a decisive swing away from pastoralism for wool and beef to the dairying which became the hallmark of the south coast in general but Bega Valley in particular.

Drought and an outbreak of pleuro-pneumonia among cattle in the mid-1860s greatly reduced the number of beef cattle in the area. At Bodalla, Mort replaced these losses with dairy cattle instead. Mort took a farm control over the type of livestock and his tenants’ cattle-breeding programmes; the Illawarra Shorthorn, the Friesians and the Jerseys which became characteristic of the south coast in the twentieth century were introduced at Comerang and Bodalla in the 1870s. The first really large milking sheds were erected at Comerang, bailing sixty cows. Different breeds were carefully separated and their milk then blended in a series of experiments to improve the quality of butter and cheese.

Whey, which is a by-product of cheese making, was used at Bodalla to fatten pigs and in 1873 Mort built a bacon factory (still standing on Holme Farm at Comerang): with specialised equipment, specialised personnel and carefully bred Berkshire and Albert pigs, the bacon products from Bodalla were a model for the entire south coast. Although Mort died in 1878 and his estates passed through the hands of trustees into company hands with attendant sub-division of Bodalla into thirteen leasehold farms, the cheese and bacon factories remained with the family company until it merged with the Bodalla Cooperative Company in 1923.

Similar developments occurred at Kameruka in the 1870s as Robert Lucas Tooth consolidated his land.
holdings and turned to dairying; the change was a few years behind Mort, however, and Tooth's manager bought his last major stud bull for beef cattle as late as 1873. Over the late 1870s, however, six dairy farms were created out of this central portion of Kameruka and Tooth introduced the new technologies of cream separation and the Babcock tester in 1886 and 1892. By 1904 he had created eight more dairy farms in the Bega-Bemboka valley, with a reputation equal to Bodalla for the quality of the milking cattle and the quality of life for the tenantry.

The rest of the Bega Valley turned to dairying in earnest in the late 1880s, after the drought broke in 1886. Already in the late 1870s small private cheese factories had opened at The Island (at Kameruka), Wolumla, Elm Grove and Tarraganda, but the first two catered primarily for Tooth's Kameruka milk and it was only when a larger number of farmers moved over to dairy cows in the late 1880s and 1890s that the butter and cheese industry really developed in the valley at large. The first big dairy factory was founded in 1894 at Yarranung, just north of Bega. This factory, operated by the NSW Creamery Butter Co. survives as a storage shed on a dairy farm today and has an importance just as great in its way as the more attractive buildings at Kameruka and Bodalla. This new company 'revolutionised the dairying industry in the district' and there were soon new factories at Bega, Mogilla and Cobargo as well as fourteen auxiliary creameries.110

A new and highly significant element also appeared in the dairying scene. Factories run by farmers' co-operatives had first appeared in the Illawarra in 1883. The first co-operative butter factory on the south coast opened at Wolumla (inland from Merimbula) in 1887. During the 1890s two other co-operative butter factories opened at Candelo and West End [near Mogilla] but more importantly co-operative cheese factories appeared, first at Tilba Tilba, Central Tilba and, in 1900-01, at Bega and Cobargo. By 1903 all non-co-operative butter factories in the Bega Valley had closed except Kameruka (though Bodalla in the Tuross Valley did not become a co-operative until 1923).

In the Bega Valley the number of dairy farmers supplying the co-operative factories had grown rapidly to 110 in 1901 and to 162 in 1902, although the number then stabilised. The economic basis, and the way of life of the farming community, had changed dramatically over the past twenty years. The local paper, the Bega Standard, indulged in complacent self-congratulation in 1902:

...Bega is a paradise. Abundance of grass waving in the paddocks like a crop of oats; stock in splendid condition; cows giving big yields; good crops; the happy faces of the farmers who are drawing large cheques on the tenth of every month for their cream and milk supplies to the factories.111

The brand-names of south coast cheeses became widely known and respected - Jellat, Kanoona, Elmgrove, Warragaburra, Kameruka - just like the Bega Co-operative butter brands, Burrawang, Bega and Merriga. By 1900 half of New South Wales' cheese came from the Bega Valley. But little remains of these early cheesemaking buildings since the tiresome insistence of the Dairy Industry Act of 1915 on hygiene and quality-testing resulted in the replacement of most of the early factories: Bega Co-operative's wooden factory of 1900, for example, was pulled down and a new brick and concrete building erected in 1924. The factories built in the early twentieth century had been very numerous: in 1917 there were no fewer than 47 cheese factories (only one co-operative) and seven butter factories (all but one co-operative).112 (Fig 14.5).

The number of cheese factories contracted in the 1930s and by 1942 there were only seven in all, three of them co-operative (ABC at Central Tilba, Tilba Tilba and Erina). This apparent contraction is, however, misleading. The expansion of the milk market to Canberra in the 1950s and the ending of the milk-zoning regulations in 1977 gave Bega Valley new markets and new energy, with an increased production of milk and a mass market for packaged cheese. The dairy had been transformed from a small farm operation, through technological advances and the rapid expansion of co-operative entrepreneurship, into a highly successful modern business undertaking.

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Bega Valley Butter and Cheese Factories 1917

Butter Factories
1. Bega Co-operative Creamery Co Ltd
2. Bemboka Co-operative Butter Co Ltd
3. Candelco Co-operative Dairy Co Ltd
4. Cobargo Co-operative Butter Factory
5. Home Farm Butter Company
6. South Wolumla Creamery Co Ltd
7. West End Creamery Co-operative Co Ltd
   Crossing

Cheese Factories
1. ABC Dairy Factory Co Ltd
2. Angledale Cheese Factory
3. Ayrdale Cheese Factory
4. Barrabooka Cheese Factory
5. ‘Briandery’ Factory
6. Bright Hills Factory
7. Buckajo Cheese Factory [TJ Bateman]
9. Curtis, Walter
10. Deep Dene Factory [Mrs A Targett]
11. Distant View [Mrs D.Sercome]
12. Elmgrove Factory [Geo Guthrey]
13. Ermita Co-operative Cheese Factory Ltd
14. Essex Hill Factory
15. Fairfield Factory [JJ Brown]
16. Pernlee Factory
17. Jollat Jellat Cheese Factory
18. ‘Kaewieng’ Factory
19. Kanoona Factory
20. Lake View [Isaac Game]
21. Lake View [FH Anderson]
22. Lane’s XXX Kameruka
23. ‘Mayfield’ Factory [FM Du Ross]
24. Meringlo Factory [Catherine Rheinberger]
25. ‘Mountain View’ [HJ Bate]
26. Mountain View (Wm Jauncey)
27. Murrah Cheese Factory [Edgar O Gowing]
28. ‘Niagara’ Cheese Factory
29. ‘Oaklands’ Cheese Factory [Jas Jauncey]
30. Orion Cheese Factory [Est Late P Hegenhan]
31. Pidgeonvale Factory [T Wilson]
32. Ritchie, HB ‘Limgrove’ Factory
33. Ritchie, HB ‘Hillside’ Factory
34. Ritchie, HB ‘Penuca’ Factory
35. ‘Rose Brook’ Factory [Lucas Bros.]
36. Schomberg, O ‘Broadview’ Factory
37. ‘Springvale’ Cheese Factory [EH Filmer]
38. Springfield Factory [EE Gilkes]
39. Stiles, EF
40. ‘The Island’ Cheese Factory [Kameruka Est.]
41. The Meadows Cheese Factory [D. Gowing]
42. View Mount Factory [J & T Walsh]
43. Wandella Cheese Factory [John McVeity]
44. Wangrungla Cheese Factory [JG Boxsell]
45. Wattalia Factory [Walter Dalton]
46. ‘Wolumla’ Cheese Factory [Kameruka Est.]
47. Yarranung Cheese Factory [Est Late PH Wood]
Ironically, the two model estates of Kameruka and Bodalla, redolent of colonial perceptions and paternalism, are the best known part of the dairying heritage of the south coast.

COASTAL SHIPPING AND SHIPWRECKS

Because of the extreme difficulty posed by the coastal roads, coastal shipping remained for over a century the main line of communication for south coast farmers. No railway was ever built in the area, so shipping remained unchallenged for a remarkably long time. The critical stage in establishing a regular steamer service between Sydney, the south coast and Melbourne came in the 1850s. The Kiama Steam Navigation Company, formed in 1852, amalgamated with the Wollongong, Kiama and Shoalhaven Steam Navigation Company in 1857-58 to form the Illawarra and South Coast Steam Navigation Company. This major company, which closed only in 1948, operated initially through Merimbula, Eden and Bermagui. Kiangan Bay, north of Tathra, had a small wharf so that lighters could take passengers and cargo out to join the Illawarra company ships between Merimbula and Bermagui.

This was not satisfactory for the settlers in Bega Valley and the deepwater wharf at Tathra was constructed in 1861-62 specifically to service Bega Valley: simultaneously a reasonable road from Bega to Tathra was constructed. The great timber jetty at Tathra remained the essential lifeline for the Bega Valley pastoral and then dairy industry in the modern period: the last cargo boat steamed away from Tathra wharf only in 1957, thirty years after the last passenger boat, the Merimbula, was wrecked on the Illawarra shore. The wharf had, of course, been much repaired: most of the timbering had been renewed from time to time and was extended four times between 1873 and 1889 and again in 1903 and 1912. It remains today a wonderfully evocative memorial to a dynamic hundred years of south coast development.

The other memorials to the steamer trade are twenty identified wrecks. Among these are some important early sailing ships and early steamships. The earliest known sailing ship is the schooner Rover in Broulee Bay, where it was wrecked in 1842. The earliest steamship is the paddle steamer Mimosa, one of the founding purchases of the new Illawarra and South Coast Company in 1858, wrecked five years later north of Tathra. The first custom-made steam collier on the south coast, the Lady Darling, built in 1864, lies off Montague Island near Narooma where it hit a reef in 1880.

At Green Cape there are the remains of two ships built in the 1850s and wrecked in 1862 (City of Sydney) and 1886 (Ly-ee-Moon). Near the Inlay whaling boat station at Mowarry lies the hulk of the Lanercost, a collier barque wrecked in 1865, while in the late nineteenth century the Kameruka and the Monaro sank off Moruya. The colliers, Lanercost and Lady Darling, were wrecked while merely passing along the south coast, but ships like the Mimosa and Kameruka are intimately connected with the developmental phase of the region and the Rover is redolent of the heroic period of early settlement. [Fig 14.6].

GOLD AND SILVER

Gold deposits are found in a wide variety of mountains and alluvial valleys from the Tomaga River south of Batemans Bay right down to the high ridge separating the Bega and Towamba river valleys inland from Eden. From 1852, when the Rev W.B. Clarke first recorded alluvial gold near Eden, right up to the present day, prospecting and mining of all sorts have gone on somewhere along the south coast region. Since most gold areas have been explored and exploited intermittently over a long time-span, the clearest way to present the mining history of the area (and to clarify its heritage impact) is to work down the coast from north to south. [Figs 14.7, 14.8].

Mogo Creek, a tributary of the Tomaga River, had alluvial gold and some two dozen areas were being energetically sluiced in 1857-58. This continued off and on, the township of Mogo grew up as a direct result and in 1871 between forty and fifty men were working the gravels of the creek bed and bank. Shaft mining followed, to find the reef, and by 1892 crushing equipment had been installed. Mines also opened along the same reef to the south at Bimbimbri, where there was a battery by 1902. All the Mogo and Bimbimbri mines seem to have closed by 1913.
The Moruya River and its upper reaches known as the Deua River produced a certain amount of gold and silver. In 1856 gold was found at Wamban Creek, but the principal mines were close to Moruya on Dwyers Creek. Here, south of the township, a stamp battery had been set up by 1859, and the complex ores containing gold, silver and arsenic began to be exploited in the 1860s. The ores were being shipped to London for processing in the mid-1860s but in the 1870s the new owner, Francis Guy of Batemans Bay, sent ore instead to Wallaroo in South Australia. Guy and his family continued to operate the mines until 1914; by 1890 he had installed a ten-head battery on the south bank of Dwyers Creek, had constructed a long weir on top of the natural rock bar in the creek and had made a new road better fitted for wheeled vehicles. In 1923 the mines were reopened by the Moruya Gold and Arsenic Syndicate, primarily to obtain arsenic; a chemical laboratory was constructed but the venture did not prosper and most of the site was bulldozed.

Some eight kilometres to the south, the Bergalia reefs were attacked in 1865 but the company collapsed before 1870.

A much more determined effort was made at Nerrigundah, near the Tuross River and due west of Bodalla. Gold had been found there early in the 1850s and by 1861 200 to 300 miners (soon joined by many Chinese) were scattered along twenty kilometres of Gulf Creek, a tributary of the Tuross. The creek is still hard of access and in most of the mining area in the nineteenth century no bullock wagons could gain entry. Nonetheless the number of miners increased to around 400 and the township of Nerrigundah expanded. The goldfield had remarkable staying powers. A ten-head battery was erected in 1900, new shafts were sunk on Mount Utopia, sixteen kilometres to the west, and ore was brought with great difficulty to the Tinpot battery at Nerrigundah. It is probably Mount Utopia which is shown with a horse-whim at its shaft in a photograph of 1900. Shaft mining was, however, failing to be economic and the new technology of dredging (introduced from New Zealand in 1899) was tried instead: a dredge was built at Nerrigundah itself, because there was no way that one could be transported from the coast, and it was probably used in 1902-03. Presumably the dredge remains, in whole or in part, on Gulf Creek or the Tuross River, just as two dredges remain in Araluen Creek on the tableland above, but no survey of Nerrigundah appears to be available. This bravura dredge-building on a precipitous creek was the last fling of the Nerrigundah miners and the town and district quietly faded away. The store in the town closed in 1977 and the only building left today is a sawmill.

Only 1.6 kilometres from the coast, seven claims were staked just north of Wagonga Inlet in 1882 and quartz-mining was planned. By 1900 the site was quite active: a ten-head battery was crushing ore and two Huntington mills were in the process of erection by the McDonald Goldmining Company. The shaft mining seems to have faltered, however, and in 1902 Wagonga, like Nerrigundah, built its own dredge. The local blacksmith constructed the wooden dredge on the beach of Wagonga inlet and it presumably dredged the estuary of the Tuross River more hopefully than profitably.

In the steep hills above Tilba Tilba on the slopes of Mount Dromedary an auriferous reef was sought for many years. There was a small rush in 1860 and, although that did not succeed, the storekeepers at Wagonga, which supplied both Nerrigundah and Tilba Tilba, kept encouraging continued endeavour at both sites. The reef was finally located only about 500 metres below the summit of Mount Dromedary and, despite the appalling difficulties of access, mining continued into the 1920s. The battery for the Enterprise mine was operated by two large waterwheels on the mountainside. The largest of the mines, run by the Mount Dromedary Proprietary Gold Mining Company, was employing fifty men in 1899. Although these fifty men produced only 87oz of gold that year, all this greatly encouraged the growth of Tilba Tilba which simultaneously reaped the benefits of goldmining and of cooperative cheesemaking.

Just inland from Merimbula on the Black Range, the Wolumla goldfield opened in 1896. In 1897 the
Mount Momsen Gold and Silver Mining Syndicate raised 429 oz of gold and 1,586 oz of silver. In 1897 the syndicate installed a Huntington mill on the main road, but some ore was sent to the Dapto smelter, because of its complexity. Despite its excellent beginnings, nothing more was heard of Mount Momsen until 1902 when a little gold and silver was obtained: it then operated from 1913 to 1920 under new management. In the meantime the Pacific mine had become very productive in 1903 to 1915, peaking in 1908 when 3,227 oz of gold were sold. This major mine reopened, with small returns, off and on from 1922 to 1937 and prospecting continued until the headframe and timber lining were burnt in 1954. Also in the period 1911 to 1915 the New Venture Mine produced over 1,000 oz of gold and 560 oz of silver. But after World War I the entire field failed to produce any dramatic success and it quietly petered out in the 1930s.

The creek where Clarke had observed traces of gold in 1852 is now known as Yowaka, just south of Pambula. Payable gold was not found there until 1889, but by 1890 there were several shafts, 211 applications for mineral leases, three stamp batteries and a properly constituted Pambula Gold Field. In the following year there were seven batteries or Huntington mills, 350 miners and a new township of Yowaka. Eleven companies were floated with a capital of almost $1 million. The gold was exceptionally fine-grained, so an undesirable amount remained in the tailings: as a result the new technology of cyanide treatment was especially relevant on the Pambula goldfield and several of the companies invested in cyanide plant in 1895 and subsequent years. Even before cyanide was introduced, the Mount Gahan and the Pambula Gold Mining Companies extracted almost $40,000 of gold in 1892 and two other companies sent their ore to Germany or to Sydney for processing. The Mount Gahan and Hidden Treasure Companies produced at a similarly high level in 1893-94, the Falkner mine in 1895 (the year in which the company went over to cyanide treatment). In 1898 the Falkner mine treated its earlier tailings with some mild success while gaining over $24,000 from new ore.

After the 1890s the Pambula field declined but only very slowly; Mount Gahan closed from 1897 until 1906; the Falkner mine was closed in 1900-02; and when the Pambula Mines Company was wound up in 1902, its major mine, Black & Berrys, did not reopen. On the other hand, Diorite Mine at Yowaka, which had closed in the 1890s, reopened successfully in 1909 and, partly by re-treating slimes and battery sands, continued until 1915. The Brasskockeye mine reopened from 1911 to 1916 and again in 1937 to 1939, again working old sand with cyanide and in the 1940s, 1950s and 1960s prospecting work in the Pambula-Yowaka area, particularly inland at Mount Darragh, went on intermittently. At least thirty mines were operated around Pambula and the goldfield, which is in an area vulnerable to timber-getting, is in need of recording.

Yet another attempt by prospectors to find payable gold was on Sugarloaf Mountain just north of Towamba River inland from Eden. The Prospectors Mine operated from 1927 to 1937 and was opened again in 1948-49.

Still further south, the Yamhulla goldfield on a tributary of the Wallagaraugh River was worked from 1891, but its successful years were only from 1902 to 1912, when the most productive of the four mines, the Yamhulla, closed and the machinery transferred to the Pambula field.

All these gold reefs in the far south, Panbula, Wolumla, Sugarloaf Mountain and Yamhulla, suffered from the fineness of the gold and the complexity of the ores. The technological problems in maximising the returns were never adequately solved, but the pertinacity of successive miners is striking.

**QUARRYING**

On both the north and south banks of the Moruya River there are very substantial outcrops of granite. The Scottish captain of Moruya pilot station noted the quality of the granite and sent a sample to Sydney in 1865. Quarrying soon began on the south bank under Joseph Ziegler and 1868 John Young leased Ziegler’s quarry to supply granite columns for the colonnades of the GPO in Sydney. Although the shifting bar across the exit of the Moruya River did not make for comfortable navigation, particularly for boats laden with granite blocks, the position of the quarry so close
to a substantial river was exceedingly convenient. After the major Sydney contract had been met in the 1870s, the quarry on the south bank gradually declined.

Moruya granite revived dramatically with another important Sydney commission in 1924. Dorman Long acquired mining rights to the granite outcrop on crown land on the north side of the river to supply the stone for the pylons of Sydney Harbour Bridge and the firm commissioned three freighters from Newcastle for the express purpose of bringing the stone from Moruya to Sydney. The stone was dressed on the spot at Moruya, so that it could be transferred directly from the ships to the new pylons.

A wharf was constructed near the quarry and a new settlement, known as Granite Town, quickly grew up, with a cosmopolitan population of Italians, English, Australians and, especially, Scots. These Scots came from the granite city of Aberdeen and gave a special character to the township under their quarry-master John Gilmore. Dorman Long erected 72 wooden houses and laid out streets. By 1926 Granite Town had a Progress Association, and a weatherboard recreation hall on granite foundations was opened in the following year, J.J.C. Bradfield, the engineer of the Harbour Bridge, declared in that year, 1927, that there was enough granite in Moruya 'for all the building likely to be done in Sydney for centuries', but when the pylons of the bridge were completed in 1932 the quarrymen were already leaving Moruya and Granite Town soon disappeared. Houses were moved elsewhere - one very good example is now in Hawdon Street, Moruya - and the site is now deserted, though clearly identifiable.

Only the overgrown quarry remains. But the colonnades of the Post Office in Martin Place and the pylons of the Harbour Bridge have ensured that the two phases of Moruya stone-working have made an indelible mark on the heritage of New South Wales.116

FISHING
Ever since Aboriginal times, the south coast has been well-known for the quality of its fishing grounds. Because of transport difficulties before refrigeration, this was not a commercial enterprise in European times. Canning was ultimately the answer: in the nineteenth century there were short-lived attempts at Pambula in 1838 and Eden in 1871 to preserve beef for a wider market,117 but fish-canning did not begin until the twentieth century. The tuna fleet operating from Narooma and Eden supplied the major canny, established in 1937 on Wagonga Inlet, and since then tuna and abalone have become very important elements in the south coast economy.

The potential of Twofold Bay for seine-net fishing had been noted by George Bass in 1798: 'the beaches are admirably adapted for Seine hawling'.118 This potential was finally realised in 1936 when trawling by Danish seine-nets was introduced to Eden. Thereafter flathead were caught in quite good numbers and trucked in ice to Sydney or taken by boat to Melbourne.119 The establishment of Eden Fishermen's Co-operative in 1945, one of the earliest co-operative ventures in the post-war reorganisation of New South Wales fishing, confirmed the position of Eden as the leading fishery in the south coast region.

The game fishing available has also been a major element in attracting seasonal tourism.

TIMBER-GETTING
The very large forested areas between the valleys offer a major historical resource and the large-scale timber-getting which feeds the existing Harris-Daishowa woodchip plant at Eden and may feed a proposed new chipping mill is a powerful environmental issue in 1990. This is a new and very destructive attack on the south coast forests, but it has a long historic context. The dairying industry of the valleys was not achieved without massive clearing of natural woodland. The careful preservation of clumps of trees by T.S. Mort at Bodalla and the exotic landscaping of Robert Lucas Tooth moderated the effects of clearing but did nothing to reduce the changing of the environment.

Wood was also needed, of course, for building houses and farmsteadings. Magnificent stands of turpentine were sacrificed to create Tathra wharf. A great deal of timber was used in the dozens of goldmines. But real commercial timber-getting
only got underway in the late nineteenth century when a regular contract to supply railway sleepers was obtained. Forest exploitation continued after wooden sleepers became anachronistic and the present controversial logging on an enormous scale is a result of a dramatic increase in pace within the technology of the timber industry worldwide.

CONCLUSION
The south coast is a long way away. Unlike the Murray region it did not develop a special relationship with Victoria and communications with Sydney were dependant first on sailing-boats and then, after 1858, on the steamships plying the coast from their Illawarra base. As a result the area developed slowly as a pastoral area, but developed a very important whaling industry in locally owned boats operating from Twofold Bay. Whaling also involved the Aboriginal community as equal partners to an unusual degree: elsewhere the local Aboriginal people suffered the usual loss of lifeways through European settlement on the coast and valleys.

The transformation from beef cattle and sheep to dairy cattle changed the face of farming and farm buildings and two major paternalistic estates, Kameruka and Bodalla, also created a physical expression of Victorian ideologies of work and benevolent landlairdism. In the twentieth century Bega Valley assumed a dominant position in the milk and cheese production of southern New South Wales and Canberra.

The forested hills which separate the fertile valleys are rich in minerals and there was a long succession of attempts to win primarily gold but also silver and for a short time arsenic, mainly from the mountain creeks and hillsides. This brought outside capital into the area and has left manifest physical scars and important equipment not yet systematically recorded.

The forests themselves were gradually culled to build houses, byres and wharves and more commercially to supply NSW railways with high quality sleepers but the large-scale logging which is so controversial today is a recent development.

The waters around contain many important wrecks, significant evidence of coastal trade over 150 years. They also contained whales and when the industry closed in the 1920s, tuna became a major commercial source, leading to the establishment of the Narooma canneries in 1937 and further expansion. Abalone has become increasingly important and game-fishing attracts many tourists.

FIGURE 14.1. ABORIGINAL GROUPS IN SOUTH-EASTERN AUSTRALIA

Their territories shown in relation to the natural drainage basins. The basins of the south coast heritage region are the valleys of the Moruya (17), the Tuross (18), the Bega (19) and the Towamba (20).

FIGURE 14.2. ABORIGINAL ARCHAEOLOGICAL SITES ON THE SOUTH COAST FROM DURRAS TO BERMAGUI.

FIGURE 14.3. THE LOCATION OF WHALING SITES IN THE AREA OF TWOFOLD BAY.

FIGURE 14.4. BEGA VALLEY AND THE LANDHOLDINGS AND SALES OF THE MEMBERS OF THE TWOFOLD BAY PASTORAL ASSOCIATION.

FIGURE 14.5. THE LOCATION OF BUTTER FACTORIES IN THE BEGA VALLEY IN 1917.

FIGURE 14.6. SHIPWRECKS OFF THE SOUTH COAST REGION OF NSW.

FIGURE 14.7. GOLD-MINING SITE FROM MOGO TO MOUNT DROMEDARY.

The township names near the mines are underlined.


FIGURE 14.8. MINES ON THE PAMBULA, SUGARLOAF MOUNTAIN, WOLUMLA AND YAMBULLA GOLD FIELDS.

This is a long, narrow coastal region bordered on the west by steep scarps with few crossings, as at Bulli, Macquarie Pass, Fitzroy Falls. The rugged sandstone plateau separated this from inland regions. It is connected to Sydney by railway from Nowra.

The coastal plain takes the form of valleys containing alluvium, and basalt in the Kiama area, separated by ridges, often of infertile sandstone.

The region falls into four districts: the industrialised and urbanised region between Thirroul and Kiama; the rolling valley and fertile latte hill country between Kiama and the Shoalhaven; the valley alluviums of the Shoalhaven and its delta, and the valleys and dissected sandstone plateaux south of the Shoalhaven.

Much of the district at settlement was in rainforest; as at Wollongong, the Jamberoo Valley and the Shoalhaven. Otherwise, except for valley wetlands, eucalypt forest prevailed, with Bloodwood, Spotted Gum, Blackbutt; Grey Box and Stringybark prevalent. Much has been cleared for timber and grazing.

South of the urban area of Wollongong, dairying has been the chief rural industry. Resort and retirement development occurs widely.

The southern boundary of this region approximates to the Limits of Location of 1829, the County of St Vincent. The 1830s definition of the Illawarra included the Shoalhaven River, and to include this an area south of the Shoalhaven has had to be incorporated.
LOCAL GOVERNMENT UNITS

CITIES
Shoalhaven, Wollongong

MUNICIPALITIES
Kiama, Shellharbour
This region is a narrow strip of lowland separated from the tablelands by a steep scarp which offers access in only a few places, though a railway links Wollongong with Moss Vale for industrial purposes. It can be divided into distinct regions based on history and land use: the Greater Wollongong area in the north, dominated by its coalfield, the Kiama and Jamberoo Valley district; Kangaroo Valley, the Shoalhaven delta; and the largely undeveloped sandstone country south of Nowra but included in the City of Shoalhaven. Coal, dairying and resort development are the keys to this whole region.

GREATER WOLLONGONG

By a process of accretion, a number of separate port and mining settlements have grown into a single conurbation with a population of 211,000 in 1976. This settlement lies on a narrow coastal plain barred from the interior by a high escarpment which is crossed by two road passes (there was once a third, Rixon's Pass) and rail links to Sydney and the southern tablelands.

Historically, a further barrier has been the wide area of barren sandstone country which separates Greater Wollongong from Sydney. The topography of the coastal plain has influenced the form of the settlement: broad marshy valleys draining from the escarpment to the sea are unoccupied, or left to industry and playing fields, with houses occupying the intervening ridges. To the south, the plain widens around Lake Illawarra, giving room for recent residential expansion.

Settlement has proceeded in three phases, each leaving elements in the present cultural landscape. Rural occupation began about 1815, when graziers from the drought-stricken County of Cumberland found a way down to the pastures of the Illawarra. The first surveys were made in 1816, and by 1822 some 10,000 acres had been granted. In this early period, cattle and sheep were grazed on the extensive grasslands around Lake Illawarra, and Dapto and Shellharbour grew up as villages to serve this area. To the north, cedar-cutters worked in the mixed eucalypt and rainforest land that occupied the narrow coastal plain and lower slopes of the escarpment. The useful softwood was shipped to Sydney, while rather less was taken by land to Parramatta. Cedar had nearly all gone from Illawarra by 1822, and the northern area was coming under cultivation on small farms. Most of the land by this time was held in large grants, and the farmers were tenants on clearing leases, given the use of the land for seven years on the condition that they cleared it within that time. With cheap sea transport to Sydney, the farmers could produce wheat, maize, vegetables, eggs, poultry and dairy products for the profitable market there. There were 14,000 acres under cultivation in 1850, but rust had already appeared in the wheat - a prelude to the shift of this crop to the drier inland. Dairying replaced wheat, but urban growth has recently extinguished the last dairy farm.

Small villages grew up to serve the farmers at Fairy Meadow and Bellambi-by-the-Sea, but the main settlement was at Wollongong, the chief port, which was improved in 1844, by the excavation of a basin and building a breakwater, and again in the 1860s, while a lighthouse was built in 1868.

Wollongong was a late foundation because the Surveyor General believed at first that Kiama would become the chief town of this region - Kiama had much larger reserves of cedar. Since the earliest settlement a garrison had been stationed at Wollongong boat harbour, but no land had been reserved for a town there. When therefore it was decided in the early 1830s to site a town at Wollongong, the best land available close to the harbour was privately owned. This land was surveyed with streets and allotments, and adjoining it a government town was laid out later. The private town was given a Market Street running from the harbour to the church site, and a market square, but this never developed as the main commercial area, which instead grew along Crown Street, the street most used by the settlers on the way to the wharf. The private town was retarded in its growth, becoming a good residential area in the mid- and late- nineteenth century.

Coal was found here in 1797, but the problem of shipping from a hostile coast delayed its exploitation. A mine was opened in 1849, on the breaking of the Australian Agricultural Company's monopoly, but this failed, and mining did not begin in earnest until the opening of the Osborne-Wallsend mine in 1857 under the stimulus of high prices occasioned by the gold rushes. Shipping was going over to steam, and secondary industry was developing in Sydney to further increase the demand for coal. By 1862 there were four mines, producing 42,000 tons per annum. Coal was
shipped to Sydney from jetties placed on the northern sides of headlands for shelter from the prevailing southeasterlies, and the jetties were linked to mines high on the escarpment by tramways using inclined planes and gravity haulage on the steep sections. Mining villages grew up: to the south, where the mines were several miles from Wollongong harbour and Port Kembla jetty, the villages Balgownie, Mount Keira and Mount Kembla were located close to the mines. To the north where the plain narrows, they were located on the level land intermediate between mine and jetty. Some villages were company owned and contained uniform rows of weatherboard houses, while others grew up on private land, where miners built their own wooden, iron or hessian shack. Nothing remains of the nineteenth-century private villages, but at Scarborough a company village is perfectly preserved, while there are elements too at Clifton, Balgownie and Mount Kembla. On the coastal plain was also located a number of coke oven plants, at Coalcliff, Clifton, Coledale, Scarborough, Bulli, Corrimal, Wollongong, Port Kembla and Unanderra, beginning at Wollongong in 1878, but the last of these old beehive ovens has now been demolished.

The 1860s were a period of depression in the coal industry, but the rapid growth of the economy brought increased demand in the 1870s and 1880s. In 1887 a railway linked the northern mines to Wollongong, and this line was linked through to Sydney in 1889. Freed from the costly and hazardous jetties (though some continued in use until the 1940s), coal mining expanded greatly, taking over most of Lithgow's trade in coal with Sydney. New mines and mining village opened, for example Thirroul, Coledale, Clifton and Helensburgh, which is a government town but has some remaining company houses in the private town to the east. Coal continued as the major employer of labour into the 1920s and 1930s, the mining villages remaining separate settlements with Wollongong as the chief town.

The railway also brought tourism to the Illawarra. At first, tourists came to see the grand view from the top of Bulli Pass, the epitome of sublime scenery, and the elaborate hotel at Bulli was built to serve them rather than the local miners. Then, after 1900, as sea bathing replaced sightseeing, resorts grew up at Austinmer, Thirroul and Stanwell Park, though Thirroul was ruined as a recreational centre by railway development.

Wollongong's third phase of development has swamped the first two in a sea of postwar housing. Manufacturing industry came in as the result of harbour improvement. The Belmore Basin at Wollongong, despite improvements, was strongly criticised as inadequate in the 1880s and 1890s. One remedy was to develop Lake Illawarra as a harbour, and this led to the Mullet Creek development of a smelter for silver and gold ores in 1897, with the consequent stimulus to the growth of Dapto and Brownsville. But it is impossible to maintain an open entrance to the Lake, and only the impressive foundations of the smelting works can still be seen. A permanent solution was found instead by building a breakwater to enclose Port Kembla which was completed in 1908, though even this harbour is unsatisfactory in northeasterly swells, and a new inner harbour was completed in the 1960s.

Port Kembla attracted the Electrolytic Refinery and Smelting Company dealing with Queensland and South Australian copper ores, using the excellent coking coal found on the Illawarra field. The First World War demonstrated Australia's undue reliance on Britain for fabricated copper, and the Metal Manufacturers plant was established in 1918 to make copper bar, sheet and tubes. This was soon followed by Australian Fertilisers in 1921, making superphosphate using imported phosphate rock. The present industrial complex of major works at Port Kembla was completed in 1928, with the arrival of Hoskins iron-smelting and steel works, shifted from Lithgow because of the high cost of working there with diminishing reserves of iron ore and the costs of transporting products to Sydney. The railway to Marulan was built at this time to bring in limestone used in smelting iron, and the mining conglomerate Broken Hill Proprietary took over the works in 1935. Around these large firms has grown up a whole industrial complex of smaller firms supplying the needs of the larger ones, from oxygen gas to refractory bricks and packaging.

The greatest industrial expansion followed in 1947, with Greater Wollongong's population rising from 66,092 in 1947, to 192,039 in 1971. The old mining villages have been added to and surrounded by new housing, and large new suburbs have appeared to the south, especially around Lake.
Illawarra where their poorly chosen sites often produce a high incidence of infectious disease. New shopping centres have arisen to serve new areas at Pig Tree, Warrawong and Warilla, while a few of the older centres, such as Dapro and Fairy Meadow, have also expanded as commercial centres. The greatest impact, however, has been on central Wollongong, where a shopping and business centre erected in the boom years of the 1880s and 1890s, still largely intact in 1960, has been largely replaced by an almost complete set of new buildings.

KIAMA AND THE JAMBEROO VALLEY

In 1797 George Bass sheltered in the lee of the Blowhole Headland, and the district was not then explored until Oxley and Meehan passed over it in 1819. They found a natural harbour, and a valley behind, stretching some fifteen miles towards the sandstone Illawarra Scarp and the barren ground, the valley lush with rain forest on its latite slopes and marshy floor of the Minnamurra Swamps. This was a valuable source of cedar, but it was cut out mostly by 1825, being close to Sydney, and settlement was already taking place using large grants and clearing leases, for this was an extension of the small-farming area on the Wollongong plain to the north. The Jamberoo Valley was taken up in the 1820s, but the significant group of settlers, led by George Grey, did not arrive from County Fermanagh in Ireland until the 1840s, bringing with them a knowledge of dairy farming on basalt soils. By 1837 a plan for Kiama had been made, and the village of Jamberoo was for sale as a private village in 1841. It throve as the valley service centre, with churches built immediately, an inn, post office in 1852, and a school in 1858. Dairy products, notably butter, were shipped from Kiama, which had a post office in 1838, a court house in 1845, and Churches of England (1843) and of Rome (1858). In the 1850s there was a brewery.

As the Nine-Mile Brush was cut out, cedar getters moved south to Gerringong, a lesser natural harbour, and farmers followed, finding there the rich latite and alluvial soils. Clearing leases were again common: the lease would run for seven years, during which time the lessee would clear the land and grow wheat, barley, potatoes and feed cows for milk, selling such timber as he could. At the end of seven years the land was returned in a cleared state to the owner, who might use it, or more likely let it as a small farm tenancy, as more productive than extensive grazing. Gerringong was a late town, laid out in 1854; it had a poor harbour, but attracted stores and inns, and churches, Anglican in 1856, preceded by Presbyterian and Wesleyan churches. Kiama itself was thriving, and became a municipality in 1859.

With the widespread failure of wheat in the coastal districts in the 1860s this quickly became a specialist dairying district. Its skills in herd management and pasture improvement, and its closeness to Sydney so that butter was fresh on arrival, made it the supplier of premium grade butter in the Sydney market. Regular steam-boats plied the trade, and the Robertson shipping basin was opened at Kiama in 1876. In the early 1880s Kiama created the new dairy technology, adopting the cream separator first imported by the Fresh Food and Ice company, and combining it with the steam power, large churn, and co-operation among farmers, which was to spread the dairying industry far and wide and, with refrigerated shipping, made butter an important export staple. The first cooperative factory site is marked by a monument at Kiama, but there were a great many factories in the district, most now only marked in a paddock by a concrete slab upon which the steam engine was mounted. With the coming of the central factory in the 1890s, buttermaking centralised at Jamberoo, on the Woodstock factory. The Omega factory building still stands on a headland south of Jamberoo: before the separator, it was intended as a condensed milk factory opened in 1880, and became a butter factory in 1886. Gerringong also benefited from the new larger butter trade, grew and became a municipality in 1871, while Jamberoo, with its new importance, became incorporated in 1890. Broughton Vale came into existence to serve the new dairy industry, with a factory and incorporation. Joseph Weston, editor of the Kiama Independent and D.L. Dymock, were prime movers in this rural transformation of the district into a prosperous community of dairy farmers and cooperative factories. As farmers' sons began to seek new farms, and with all the local land taken up, there was a major exodus of people and cattle to the North Coast reaching a peak in 1890-1910. Little of the original brush remains, except in the Minnamurra Falls Reserve, and the Terragong Swamp has been entirely drained for pasture.

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At Kiama, with better shipping facilities, the blue metal trade began in earnest in the 1880s, exploiting the Bombo Latitie. Large timber loading staithes were built in Robertson Basin, and a street railway from the quarries, ultimately successful in 1913, carried the crushed stone to them. The building of railways ensured a large demand in the colony for blue metal, and 400 tons were shipped daily to Sydney. Quarrying began around the town, where the largest quarry has now been marred by bypass construction and a warehouse on its floor, and also at Bombo Point where methods of extraction and crushing are best seen. There was a jetty at Bombo, and a tent settlement for some quarrymen.

By way of stations at Unanderra, Dapto and Shellharbour, the railway reached Kiama in 1887, and was extended into the town in 1888. It at once competed with boats for butter, took a new fresh milk trade and also much of the blue metal. Kiama’s port function declined. Tourism developed and new brick buildings sprang up, using bricks from Hurstville.

Kiama meanwhile boomed; an Oddfellows Hall of 1890 became a cinema in the 1920s. There were a Temperance Hall, and a School of Arts by 1900, and a Masonic Hall in 1909. The hospital, dating from the 1887, was expanded in 1907. A gasworks was built in 1893 and a gasholder remains for preservation. Electricity arrived in 1925, a reticulated water supply in 1915, and an ambulance service in 1926. New Council chambers were built in 1933. Much of Kiama is twentieth century. Most blue metal quarries closed in World War II, but Bombo quarry remained open until the 1950s. The staithes have been demolished.

Gerringong had a poor port, and saw no such development, though it had a dairy factory. Reached by rail in about 1890, it stagnated until some rejuvenation as a tourist resort post-1945. Meanwhile, the area has been absorbed into Sydney’s milkshed, and even the remaining factory, Waughhope at Jamberoo, makes no butter. Farms have been amalgamated and the population of rural areas has fallen, but liquid milk prices are high and there has been no concession to beef cattle. The Jamberoo Valley and surrounding areas are being bought up by city people, so that hobby farms and unsuitable recreational developments threaten an idyllic rural landscape, with its stone walls and exotic coral trees.

**KANGAROO VALLEY**

Aborigines have left behind relics such as sharpening grooves at Barrengarry and cave paintings, to mark the former presence of the Wodi-Wodi tribe which occupied the whole district from the Five Islands at Wollongong to the Shoalhaven. There are no stories of conflict and massacre in the literature on this district, but in Sydney it was said that many of the Aborigines at Botany were displaced people from the South Coast. In Kangaroo Valley, the Aborigines survived at least in dwindling numbers until 1891, and in the 1880s the Protection Board had made reserves for them at Trimble Creek and near the township, but they disappear from the histories after that.

Kangaroo Valley was discovered in 1812 when Evans climbed Good Dog Mountain from the Nowra side and saw the river. Charles Throsby passed through the valley in 1818 in search of a route from the sea to the settled districts. It seems likely though that Richard Brooks had sent cattle into the valley in 1817, and certainly a grant was made to Brooks in 1820, and another to Cornelius O’Brien in 1823. These grants were around the site of the present village: others came down from Sutton Forest to occupy Broger’s Creek in the western part of the valley. All these holdings were registered by Robert Huddle in 1831 when he surveyed Kangaroo Valley. In the speculative times of the 1830s, more land was taken up for cattle stations, by Henry Osborne as an outstation of Marshall Mount near Dapto, by the notorious speculator A.B. Spark, and by L. Duguid. The 1841 Census however showed only seven men there, two free and five convicts.

A more lasting phase began with the arrival of Charles McCaffrey, a dairy farmer, at Barrengarry in 1846, one of the Fermanagh men. He created a dairy and took butter to port by packhorse. This seed of future growth bore fruit with the breakup of the Osborne estate into small farms, and free selection: Kangaroo Valley was one of the few areas within the Settled Districts in which this brought an increase in settlement. Dairy farmers flooded in, and the population rose from 200 in
1861 to 1,400 in 1881. A bridge over the river was built in 1875, and butter went out via the Brogers Creek road or over Good Dog Mountain.

The dairy revolution started in Kiama brought the first butter factory in 1888, and by 1900 there were five. The hand separator, which allowed farmers to take out cream to the central factory at Berry had closed all these by 1925.

At this peak of Valley population, facilities grew up. There was a school in 1871, a post office in 1870, a Horbury Hunt church in 1872 and a Catholic church in 1873. The Pioneer Hotel was built in 1875. A town was clearly needed, and the private town was sold in lots on the Osborne Estate in 1876. The grand Hampden suspension bridge was built in 1896.120 There were many small service villages, at Barrengarry, Bunbeena, Beaumont, Watamolla and Bugong gap, with at least a store, post office and chapel or church. These have now mostly vanished.

Farm amalgamation has reduced the population greatly, to less than 300; only 25 dairy farms remain of the hundreds there in 1900. Hobby farms and retirees are taking over the Valley. Most of those farmers who left went to the North Coast.

THE SHOALHAVEN

The shoal mouth of the river was noted by George Bass in 1797, and the area was explored inland by James Meachan in 1805. His reports of rainforest led to private cedar-getting by 1812, but this was distant from Sydney, and permanent settlement was delayed, as there was no overland route for traffic.

The story of settlement of the broad alluvial plains of the Shoalhaven delta and Broughton Creek begins with the Berry Estate. Alexander Berry and Edward Wollestoncraft arrived in Sydney from England with a large capital, on the basis of which they were granted 14,000 acres of land which they chose at the Shoalhaven. This was a grand colonial dream. Using convicts they cut cedar, grew maize, much of which went to feed pigs, tobacco and vines. They also ran cattle, which became the main enterprise when the cedar cut out. To improve navigation they bypassed the natural mouth of the river by cutting a canal at Crookhaven. By 1840 the estate, now in Berry's hands, had grown to 40,000 acres. At this time assigned convicts were withdrawn, and Berry, who wanted no tenants, ran the estate as a huge cattle station, with some timber getting on the side. The headquarters of the estate were at Coolangatta, on the northern head of the rivermouth, where some buildings survive as a tourist centre: the main homestead burned down in 1946.

Small farmers first took hold on other, smaller estates on the south bank of the river, estates owned as Terara by de Mestre, Warragie by Graham, and Numba by the Berry Estate though this was delayed in its development by the conservatism of the larger estates. Small farmers could also get land as selectors above the delta, and north of Berry, which was developed as a timber wharf by the estate, under the name of Broughton Creek.

The 1850s then saw a government town surveyed at Nowra.121 The main population of farmers lay about Terara and Numba, which flourished with stores, inns, banks and churches. The newspaper was published at Terara. In 1870 the most destructive of a series of floods on the Shoalhaven overran the delta towns, and encouraged a general shift to Nowra, on a flood free site.122 Numba and Terara survive virtually as ghost towns.

Alexander Berry's successor, David Berry, died in 1889, and John Hay, the new owner introduced changes which removed the stranglehold of the vast estate on development of the district. He was assisted by the arrival of the railway at Bomaderry in 1893. Much drainage of the saturated river flats was undertaken, and most of the 75,000 acres to which the estate had now grown was sold off to small farmers between 1889 and 1902. This was a vast accretion to the land open for dairying, and central factories were built at Nowra and Bomaderry in the 1890s. Meanwhile a new township was surveyed on a new location on the west side of Broughton Creek, which became Berry in 1890, and soon saw churches, post offices, banks and a large central butter factory in 1895. Bomaderry was also laid out by the estate, in 1891, and has become a manufacturing suburb of Nowra with a substantial Aboriginal population.

Nowra meanwhile since 1870 has been the chief town of the sub-region. Laid out in 1852, it enjoyed little growth until the flood of 1870, since when it
has had little competition as the dairy farms flourished around it on the alluvials. Steamships could go up to Berry and serve the farmers there, but most produce of the Shoalhaven was shipped from Nowra, maize, butter, pigs, potatoes, timber and cattle. Fishing has been an important enterprise. By 1881 the population was 886, by 1891 1,705. It became a municipality, though opposed by the Berrys, in the 1870s, and a new bridge, only recently duplicated, was built in 1888. In 1979 Nowra became the City of Shoalhaven, encompassing a large area north and south of the river.

SOUTH OF THE SHOALHAVEN
This area hardly belongs to the Illawarra proper, and is included because the City of Shoalhaven includes it. Much is incised sandstone upland with poor timber resources, and most of this is included in the Morton National Park which continues the sterilisation from development ensured by its poor soils in the past. Development is closely confined to the coast, and is mostly recent.

Ulladulla, however, provided the southernmost reserves of cedar, and provided a port site from very early. Chiefly for Alexander Mackay’s Croobyar estate, which occupied most of the useful land around the port. Tenants grew maize, potatoes, pigs and vegetables, to be followed by dairying, which became the local staple. A stone pier made a small but secure port in 1865. Another estate was subdivided in 1860 to the north and led to establishment of the town of Milton, which saw its chief but limited development in the 1870s and 1880s with some fine surviving buildings.

Jervis Bay provides excellent shelter for shipping, and was much used in this way by ships sailing between Sydney and the south coast and Melbourne during storms in the nineteenth century. However, no major port developed there, despite hopes for Huskisson, laid out in the 1830s and provided with a ‘wool road’ to Braidwood which was never much used. There was some shipbuilding at Huskisson in the mid-nineteenth century, but most development is recent.

This coastal zone has in fact largely developed as a beach and fishing recreational area since the Second World War and almost universal car ownership. Culburra, Huskisson, St. George’s basin, Sussex Inlet and Mollymook have developed as tourist centres in this period, varying chiefly in the class of accommodation they offer. Mollymook is a high class development, Sussex Inlet has developed as a caravan park resort very largely, with some mainly fibro weekenders, though this has changed with a new canal development adding expensive houses. Professional fishing is largely confined to Ulladulla and its Italian population, but amateur fishing abounds on this stretch of resort coast.

SHIPWRECKS
On a coast with few harbours, shipwrecks were numerous. The artificial harbour at Wollongong could not serve the collieries to the north, and staithes were erected, as at Bulli, to ship coal. Insurance rates were high, and the railway to Sydney of great value in reducing freight costs and hazards. The majority of shipwrecks lie around Wollongong, Jervis Bay and Wreck Bay, with a smaller number at Shellharbour.

CONCLUSION
The Illawarra region is dominated in the north by coal, and in the far south by barren sandstone uplands, but the common thread of the whole region is the dairying industry. Early agriculture was mixed, relying on wheat and maize and cattle-grazing, but from the 1840s settlers made the Kiama district a specialist dairy district which innovated dramatically in the 1880s and made the whole region a specialist dairy area. At the same time, topographically the region has distinct sub-regions, separated by landforms and noted for some particular historical influence such as the Berry Estate or the mining of the Wollongong area. Its landscape retains the traces of many separate mining villages, each dependent on adit mine and jetty, now encompassed in a combination created by post-1945 industrial development. Intensely urban in the north, rural in the centre, and with resort and retirement villages in the south, the district is held together by topography and its dairying history.