

Inland Shipping

The Navigation of the
Murray-Darling River System

The River Murray Steam Navigation Medal

In 1853 the South Australian Legislative Council approved the striking of the original River Murray Steam Navigation Medal to commemorate the beginning of commercial navigation on the Murray-Darling river system. It is an important contemporary record of one of the most important events in the history of the Murray-Darling Basin and in the history of Australian transport.

Following the navigation of the River Murray to Swan Hill and beyond by the steamers '*Mary Ann*' and '*Lady Augusta*' in September 1853, the South Australian Legislative Council ordered three gold medals to be struck to commemorate the event. One of the medals was retained by the Council and others were presented to Captain Francis Cadell of the '*Lady Augusta*' and to Sir Henry Fox Young, Governor of South Australia. Captain William Randell, the first person to place a steamer on the River Murray, was ignored but for a congratulatory letter from the Council. Public outcry at this treatment resulted in a gift of 400 guineas being made to the Randells by public subscription.

All three original gold medals have now been lost; that of the South Australian Legislative Council was stolen from the Art Gallery of South Australia in 1914. However, a small number of bronze presentation medals were struck in 1856 and one of these is held by the Powerhouse Museum in Sydney. Another strike from the badly corroded dies was made in 1919 to produce some gilt medals, one of these is held by the Murray-Darling Basin Commission.

The Navigation Medal was one of the earliest Australian commemorative medals (along with the Tasmania Cessation of Transportation Medal) and the first with an (idealised) Australian scene. It was produced by the celebrated British engraver Mr Leonard Wyon at the Royal Mint in London from a drawing by Mr Pitts of the South Australian Surveyor General's Department.

On the obverse (main design side) of the medal is the paddle steamer '*Lady Augusta*', travelling on the River Murray. The barge '*Eureka*' loaded with bales of wool is lashed alongside. The foreground depicts an early Australian fertile landscape along the River Murray with crops, sheep and cattle. Above the scene are the words '*Inter Ripas Fluo*' (between banks it flows) and in an encircling border '*Tri Juncta in Uno* (three joined in one) New South Wales, South Australia, Victoria.' On the reverse of the medal is a wreath of leaves surrounding the words: '*The Steam Navigation and Commerce of the River Murray Opened 1853.*'





©John Baker

The home-made boiler of the 'Mary Ann', the first paddle steamer on the River Murray.

The First Steamers

The first paddle steamer on the River Murray was the 'Mary Ann' which was built by the Randell brothers and launched at Noa-Noa upstream of Mannum in South Australia, in February 1853. This was 70 years after the world's first successful paddle steamer, the 'Pyroscaphe', travelled under its own steam on the River Saone near Lyon in France, in July 1783. By 1820, paddle steamers were well known in Europe and the United States of America. Australia's first paddle steamer, the 'Surprise', was launched in Sydney in 1831. By the 1840s a number of paddle steamers were operating in Australian coastal waters.

In 1848, two settlers from the Euston area, Edmund Morey and John McKinlay, went to Adelaide as representatives of station owners along the Murray and Murrumbidgee rivers to lobby the South Australian Government and Adelaide businessmen to put steamers on the River Murray. Morey provided a list of sheep numbers in the Murray-Murrumbidgee region to show the market potential for steamers. They received support from Charles Sturt and Henry Fox Young, the Governor of South Australia.

Governor Young encouraged the South Australian Legislative Council to offer a prize to the first people to operate paddle steamers on the River Murray. In August 1850 the Council offered:

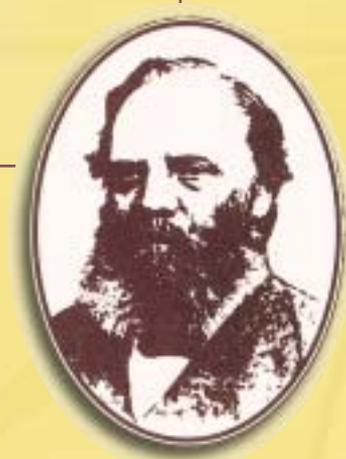
'£4 000 to be equally divided between the first two iron steamers of not less than 40 horsepower, and not exceeding two feet (60 cm) draft of water when loaded, as shall successfully navigate the waters of the River Murray from Goolwa to the junction of the Darling...!'

However, it was the discovery of gold in 1851 which created the right conditions for steamers to begin operating on the Murray-Darling river systems. Gold rushes created large markets for food and equipment, and often occurred near major rivers. The inland sheep stations could not get their wool to market, or supplies in, because carriers preferred the generally shorter and more profitable trips to the goldfields, creating a demand for labour-saving devices such as fencing wire so that the sheep could be managed by fewer people.

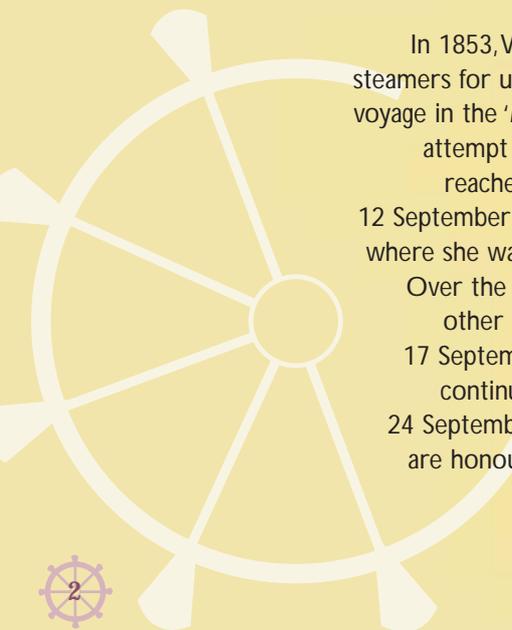
The Race

In 1853, William Randell and Francis Cadell, had completed steamers for use on the River Murray. William Randell began his voyage in the 'Mary Ann' on 15 August 1853, after abandoning an attempt earlier that year due to low water. The 'Mary Ann' reached the Darling junction on 3 September, Euston on 12 September and the Murrumbidgee junction on 14 September, where she was overtaken by Captain Cadell in the 'Lady Augusta'.

Over the next three days the boats passed and repassed each other several times. The 'Lady Augusta' reached Swan Hill on 17 September, four hours ahead of the 'Mary Ann'. The 'Mary Ann' continued up the river and reached Maiden's Punt (Moama) on 24 September. Today, these two pioneers of Murray-Darling navigation are honoured with streets named after them in many towns along the Murray, Murrumbidgee and Darling rivers.



Captain William Randell



Water Highways

The Murray, Murrumbidgee and Darling rivers provided important access to inland south-eastern Australia during the second half of the nineteenth and the beginning of the twentieth century. They were water highways. Paddle steamers with barges plied the narrow, winding watercourses to supply stations and towns with their needs and to carry wool, and other products of the surrounding land, to market. A century ago, people were far more aware of the Murray-Darling river system than today because of their dependence upon rivers for transport and communication.

From 1853, river transport played a very important part in the economy and settlement of southern and western New South Wales, northern Victoria, the Murray Valley in South Australia, and even southern Queensland. During the 1880s, the railways began to make an impact. Until then the settlers depended almost entirely on steamers to transport everything required for the successful occupation of the land. The most important era of inland river transport was the 50-year period between 1864 and 1914. It reached its peak during the decade 1870–1880 and finally ended in the mid-1930s. A total of around 300 steamers operated on the Murray-Darling river system during the riverboat era. Boats usually began and ended their lives as barges, and engines and other parts were often recycled.



©John Baker



TOP: P.S. 'Melbourne' passing through Lock 11, Mildura.

FOR SALE

EX STEAMER
'ALBURY'
on her way up the
RIVER MURRUMBIDGEE

It is expected that the steamer will reach Wagga Wagga
on or about the 15th November.

ADELAIDE FLOUR
TEA, Congee in chests. **SUGAR**, Biscuits in bags
SALT, Coarse in bags
SOAP, Liverpool, in boxes of 20lb
CANDLES, Boxes of 25lbs each. **OATS**
SHERRY, in cases of two dozen each
CLARET, in cases of one dozen each. **CURRENTS**
ALE AND PORTER, in cases of two dozen each
RUM, **FLOORING BOARDS**,
CEDAR PALINGS, five feet
EARTHENWARE, breakfast, dinner, and chamber
sets, tea pots, jugs, bowls, cups and saucers, tumbler etc.
FURNITURE, sitting, assorted patterns, half tester
bedsteads, American chairs in cases of 12, sofa mattresses
and pillows, folding chairs, large center tables.
TARPAULINS, covers and hatched canvas 16x26.
GLASS, in boxes and sheets, 10 x 8, 30 x 12, 30 x 14
IRON, in rods, round and square, of different sizes
ZINC, piping and gutters
GALVANIZED IRON, in sheets 6ft x 6in and 7ft x 6in
BOOTS & SHOES, ladies and mens. **SADDLERY**
STATIONERY, wrapping paper, ink, playing cards.
A large assortment of readable books,
BACON & HAMS, etc. etc.

Darling Junction, 27th October 1858.
WAGGA WAGGA EXPRESS,
Saturday, November 12, 1858.

Steamer Design

Most of the steamers that operated on the Murray-Darling river system were side-wheelers. They were more manoeuvrable than stern-wheelers along narrow twisting rivers. Captain William Randell also experimented briefly with a boat that had two hulls with a paddle-wheel between them. Two of his early steamers, the 'Geminii' and the 'Bunyip' were of that design. The design of the Murray-Darling steamers evolved over time to suit local conditions.

Some of the very early steamers, such as the 'Albury', 'Gundagai' and 'Moolgewanke', were narrow iron boats built in Britain and assembled in Australia. They were unstable and local 'bush carpenters' found it difficult to locate and repair leaks between the iron plates of the hulls. American-style stern wheelers first appeared in the 1860s but were generally not very successful and were often converted to side-wheelers. The 'Pevensey', now restored at Echuca, is generally regarded as the pinnacle of Murray-Darling steamer design; particularly for the Murrumbidgee trade. It is a shallow draught side-wheeler with a broad beam, a powerful engine and has a composite hull: red gum on the bottom and iron sides above the waterline. It could carry a considerable amount of wool on deck and also tow barges.

Impacts of Steamers

Riverboats and their barges could carry heavy, bulky and also relatively fragile cargos, which could not physically or economically be carried great distances by bullock wagon. A paddle steamer and barges could carry up to 2 000 bales of wool, which today would require twenty semi-trailer trucks to transport. Machinery (such as steam engines and gold mining equipment), wire, roofing iron, general supplies and luxuries (such as window glass and pianos) could be transported far inland by river and then distributed to the surrounding areas by bullock, camel or horse team. Paddle steamers greatly improved the standard of living and reduced the sense of isolation, especially in the western and southern parts of the Basin.

During the paddle steamer era, children in the towns and on the stations along the rivers knew the different paddle steamers and their captains and crews. They had their favourite boats and learned all they could about them. They could recognise different boats by the sounds of their whistles and engines. The sound of a boat always caused great excitement.

Australia's Great Waterway (by G.G. in the "AGE")

... The leviathans of the Murray get up steam by the use of wood. 'Wood piles' dot the bank of the river at stages of 25 and 50 miles, sometimes less. Each of these 'piles' is replenished for the benefit of the steamboats by two, three or four wood-getters who often live in the wilderness, and get in touch with the great world to a very limited degree only when a boat passes on its upward or downward journey.

Occasionally a woman is to be seen in one of these far-back isolated wood camps, and sometimes half a dozen little urchins almost as fleet and as wild as the rabbits that swarm in the bush around them. When the steamer is hauled alongside for 'wooding' the passenger views a primitive method of loading. A plank is placed as a gangway to the bank, and along this three or four men will take their stand. The man ashore grips a log, and it is passed from hand to hand until it is stacked near the stoke hole. When two or three or four tonnes have been shifted, the ropes are 'untied' and the little vessel steams away. From three quarters of a ton to a ton of wood are burnt aboard every hour, and in most cases it is reckoned that a ton will take the boat about ten miles...

Captains

Steamer captains on the Murray-Darling system were a mixed group who came from many parts of the world. Some were deep-sea sailors like Francis Cadell, while others, like William Randell, had no previous sailing experience. In addition to Australian-born captains, there were a number of Scots who originally worked for Francis Cadell, including George Johnston, William Barber and James Ritchie. The only ethnic Chinese captain, John Egge, also originally worked for Cadell. There were many captains who originally came from Scandinavian countries including Johann Arnold, Gustaf Lindquist and Charles Wollin. There was a Negro skipper, Daniel Alexander, and a number of other Americans.



Francis Cadell

Names

Murray-Darling steamers had a great variety of names. Some were named after large sheep stations along the rivers, such as the 'Canally' and the 'Pevensey' and the 'Nangus'. Others were named for the town that they hoped to reach. The first two steamers on the River Murray were named in honour of people. The 'Mary Ann' was named after Captain William Randell's mother. To obtain political support, Captain Cadell named the 'Lady Augusta' in honour of the wife of Sir Henry Fox Young, the Governor of South Australia at the time. Other steamers with women's names included the 'Marion', the 'Emily Jane' and the 'Ellen'. Perhaps the oddest, but most appropriate name was the 'Nil Desperandum' which roughly translated from Latin means 'do not despair' or 'no worries'.



Typical Steamer Cargo

Echuca-River Season 1908

Outward	Approximate percentage of total	Inward	Approximate percentage of total
Station Supplies:- (woolpacks, soap, cornsacks, beer, galvanised iron, kerosene)	24	Wool (include skins & tallow)	53
Store goods:- (Drapery, spirits, hardware, furniture, small goods)	18	Wheat	29
Sugar	14	Sleepers	8
Manures	14	Sawn timber	3
Timber	9	Salt	2
Flour	8	Other goods	5
Wire	7		
Agricultural produce: (oats, chaff, potatoes, onions)	6		
	100		100

A FAMINE

The 'Nellie' has not arrived here yet, the bar at the 'Bitch and Pups' having detained her. It is to be hoped the captain will succeed in jumping her over it very soon or else there will be a famine. Most of the river supplies both for here and Mildura are on board.

RIVERINA RECORDER Feb. 20 1895.
Report from Euston 17/2/1895

Navigation Conditions

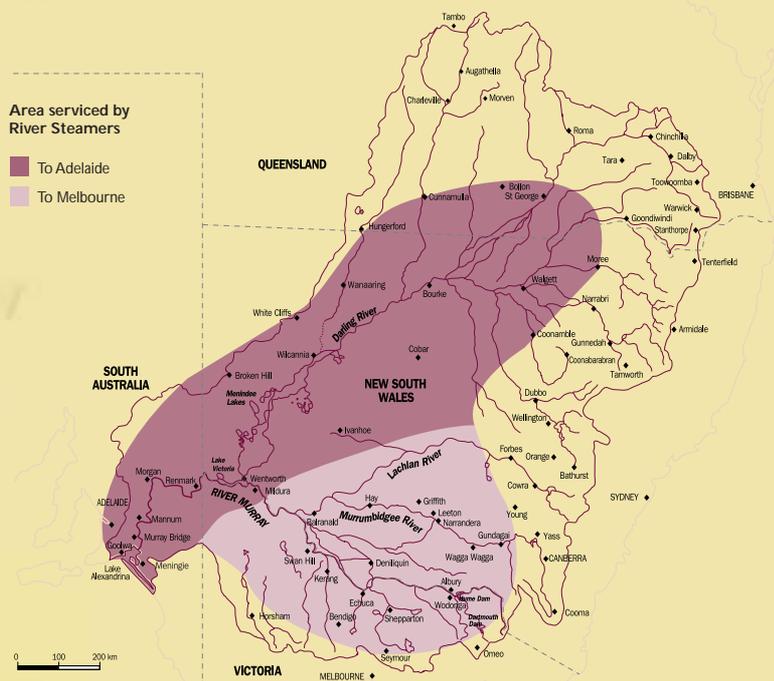
Navigating the narrow, snag-ridden, unreliable rivers of the Murray-Darling system presented many challenges. Hitting snags (logs under the water) was a constant hazard because they could punch holes through the ten-centimetre-thick red gum hulls of boats and barges or smash the floats (paddles) on the paddle-wheels. Other hazards included rock and clay reefs and sandbars in the water and overhanging tree branches from the banks. One of the greatest problems was a lack of water in the rivers to float the boats. Steamer crews hated the hard work involved on winching and coaxing boats through low rivers. Some boats became stranded, as happened to the 'Jane Eliza' which set off from Morgan in May 1883 and did not reach Bourke until June 1886!

In addition to natural hazards, there were mechanical problems and a constant threat of fire from steam engines. Sparks often set fire to cargo and occasionally steamers were destroyed. A small number of steamers were severely damaged by boiler explosions.

Floods were welcomed because boats were not confined to the river channel and could take short-cuts 'overland'.

During the 1870 floods, a steamer left the Darling River and travelled on the Paroo which in normal conditions, doesn't even join the Darling. Floods also presented problems on occasions, such as steamers not being able to fit beneath lift-span bridges or becoming lost and being left stranded away from the river channel when the water fell.

At its peak, the extent of normal commercial navigation in the Murray-Darling system was approximately 5 500 kilometres. Floods enabled steamers to travel beyond their normal limits. Albury was the limit of navigation on the River Murray. Gundagai was occasionally reached on the Murrumbidgee. In 1893, Mungindi on the NSW/Queensland border (3 000 kilometres from the sea) was reached on the Darling-Barwon river. The maximum extent of navigation in the Murray-Darling system was around 6 700 kilometres.



ARBUTHNOT DESTROYED

At midnight on Monday, at the Wakool bridge, the steamer Arbuthnot caught fire, and was burnt to the water's edge, afterwards sinking.

The Arbuthnot sailed from Echuca on Saturday with a general cargo of about 40 tons for Balranald, and arrived at Wakool between 11 and 12 o'clock on Monday night, mooring near Mr Pope's boarding house. The crew had not been in their bunks long before they were awakened by a roaring blaze, which was so intense that they were compelled to abandon the vessel without warning to collect their clothes. It is said that several of the crew narrowly escaped the flames by plunging into the river. As the cargo comprised 300 tins of naphtha, the fire made rapid progress, and before long the surrounding country was brilliantly illuminated by the resultant glare, and the sight was a magnificent one. After burning for about four or five hours, the hull and funnel were all that remained, and the water entering competed the damage, and what was left of the boat disappeared under the Edward, the top of the funnel being all that was visible.

RIVERINA RECORDER November 26, 1913

LOW RIVER

Messrs Permewan Wright and Coy's steamer Pilot has had a very trying experience in the upper reaches of the Murrumbidgee River. The trip has been one of unceasing toil and whole stretches of water had to be traversed by hauling with a winch and rope. On Wednesday the boat towing its barge arrived at Balranald and on Thursday resumed the journey to the headquarters of the fleet at Echuca. Great trouble was caused throughout the trip by snags and other obstructions in the river bed. The vessel arrived at Balranald with two men in the bows sounding the water with poles as the steamer slowly and cautiously felt her way through the deepest available water.

RIVERINA RECORDER JANUARY 5, 1910



Locks

During the late Nineteenth Century there were proposals to construct a series of 75 weirs with locks to assist navigation on the Murray-Darling system:

- 40 locks on the Darling/Barwon River between Wentworth and Walgett;
- 26 locks on the River Murray between Blanchetown and Echuca; and
- 9 locks on the Murrumbidgee River between the River Murray junction and Hay.

The first navigation lock on the Murray-Darling system was constructed near Bourke on the Darling River in 1897. In 1912, the South Australian Government engaged Captain E.N. Johnston of the United States Corps of Engineers to prepare a report on a scheme to improve the navigation of the River Murray by weirs and locks.

The designs for the locks and the weirs on the River Murray, except Mildura and Torrumbarry, were developed by Captain Johnston.

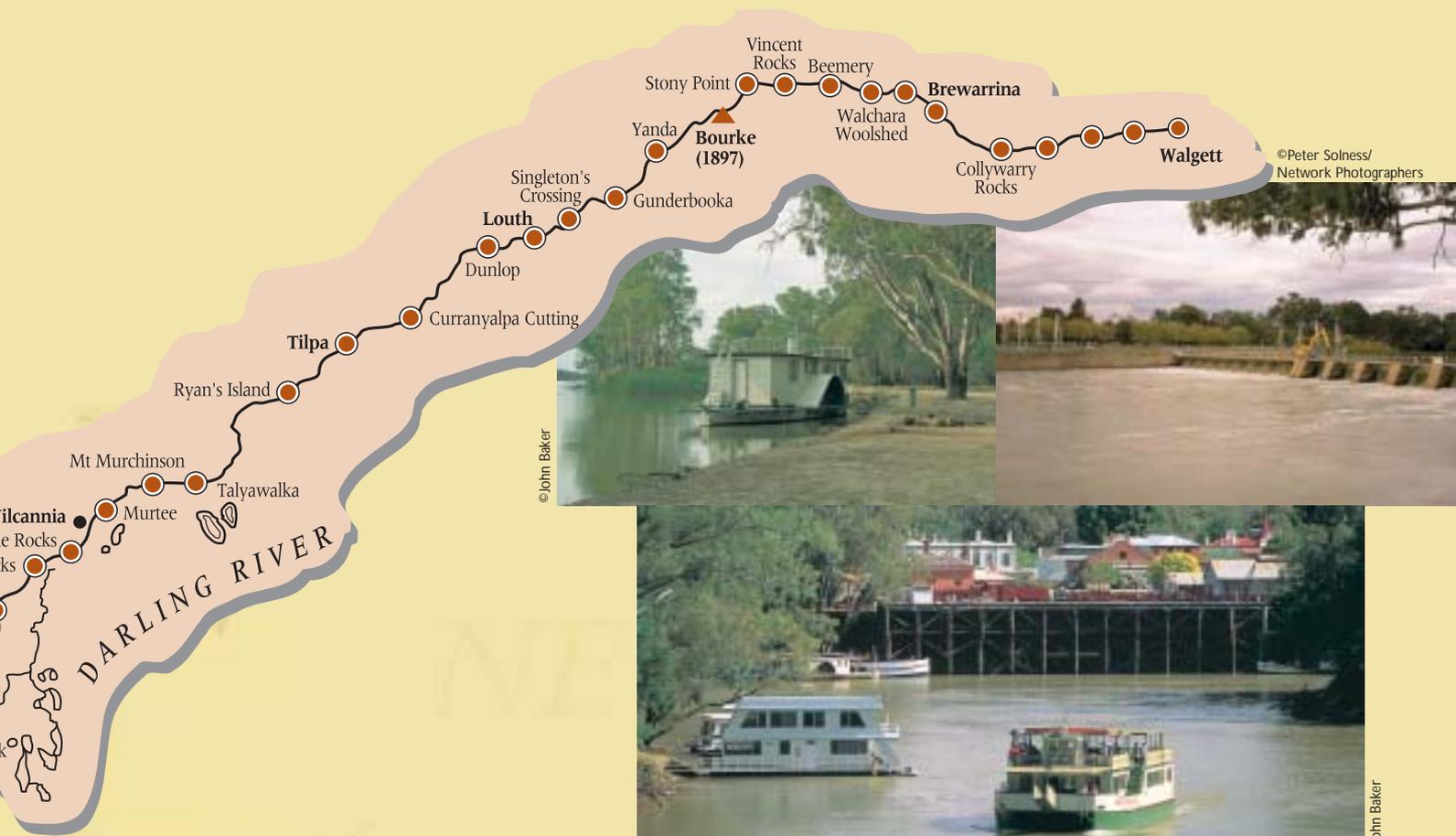
In 1915 the River Murray Waters Agreement on the management and sharing of River Murray waters was signed by the Governments of the Commonwealth, New South Wales, South Australia and Victoria. Two of the main provisions of the Agreement were:

- the construction of 26 weirs and locks on the River Murray from Blanchetown in South Australia to Echuca in Victoria; and
- the construction of nine weirs and locks on the lower part of either the Darling or Murrumbidgee rivers (the Murrumbidgee was selected).

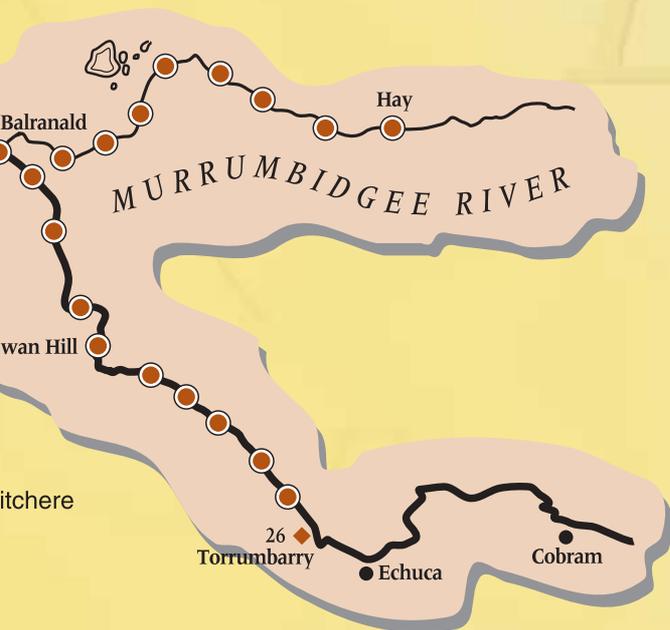
The first lock and weir on the Murray was completed at Blanchetown in 1922. But they were generally built too late to benefit the river trade, as railways and the growth of motorised road haulage had overtaken river transport.



TOP: The P.S. 'Captain Sturt' pushing barges of rock to be used in lock construction in the 1920s & 30s.
 BOTTOM: Paddle steamer 'Emmy Lou' on the River Murray below Echuca Wharf.



TOP LEFT: Paddle steamer adjacent to Barmah Forest Park. TOP RIGHT: Lock 10 at Wentworth. ABOVE: River Murray at Echuca Wharf.



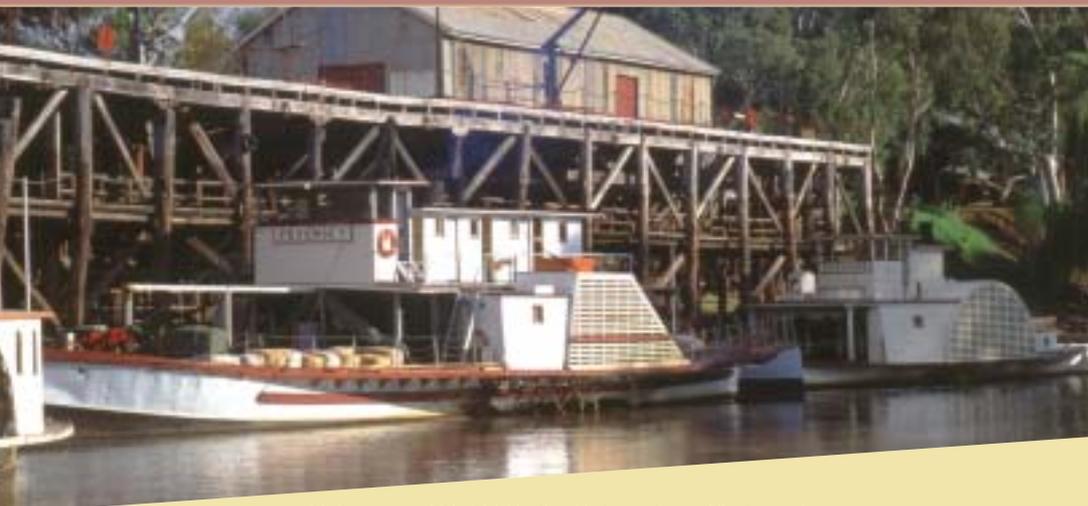
The decline in the river trade led to the abandonment, in 1934, of the construction of further weirs & locks purely for navigation purposes. The last lock was completed at Euston in 1937.

Today there are 13 navigation locks on the River Murray weirs and two locks on the barrages at the Murray mouth. They are operated on behalf of the Murray-Darling Basin Commission by SA Water, Goulburn-Murray Water and the NSW Department of Infrastructure, Planning and Natural Resources. The River Murray is permanently navigable for about 1 000 kilometres from the Murray mouth near Goolwa, to above Mildura. Eleven weirs with locks, each raising the water level behind it by an average of 3.1 metres, create a continuous series of stepped pools from Blanchetown to Mildura. Upstream of Mildura the river is navigable during periods of high flow.

Locks greatly assist recreation and tourism. They are used by far more boats today than when they operated on the river at the height of the navigation era last century. Boats at many centres along the river provide tourist cruises of between one hour and six days. Tourist paddleboats help to capture, for today's Australian, the romance of the riverboat era. Steam-driven boats have the added bonus of an aroma from the past: burning wood and hot grease, to complete the atmosphere. Houseboat cruising is also very popular for families or small groups, especially in the Sunraysia and Riverland regions.



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P.S. 'Pevensey' and P.S. 'Adelaide', the oldest operating paddle steamer in Australia (3rd oldest in the world) at Echuca Wharf, Vic.

Links with the Past

The oldest steamer on the Murray today is the P.S. 'Adelaide' which was built in 1866. She spent most of the 90 years of her working life towing barges laden with red gum logs to sawmills at Echuca. There are only two operating paddle steamers in the world that are older than the 'Adelaide'. They are the 'Skibladner', built in 1856, which operates on Lake Mjosa in Norway, and the 'Hjejlen', launched in 1861, which operates on the Silkeborg lakes in Jutland, Denmark.

The P.V. 'Coonawarra' links past and present riverboat eras. The 'Coonawarra' began life late last century as the wool barge 'J.L. Roberts', on the Murrumbidgee trade. In 1950 she was converted into a tourist cruiseboat. In 1974 the modern, all steel, diesel-powered P.V. 'Murray River Queen' was commissioned. She was the first of the new generation of tourist cruise-boats which have ensured the continuation of the navigation tradition on the River Murray. Today the 'Murray Princess', the largest passenger boat to travel the River Murray, continues a fine tradition.

'Murray Princess' at Lock 1, Blanchetown, South Australia.

SHIPPING

Thursday - Hero and barge (P.W. and Co.) left Echuca for Balranald.

Saturday - Rothbury and barge (P.W. and Co.) arrived from Hay, and sailed same day for Echuca with 1600 bales of wool.

Saturday - Oscar W. and barge (P.W. and Co.) left Echuca for Balranald.

Sunday - Alfred and barge (T.H. Freeman) left Balranald for Echuca at daybreak with 400 bales of wool.

Monday - Colonel and barge (P.W. and Co.) arrived from Hay and sailed to Echuca same day with 1200 bales of wool.

Tuesday - Albert and barge (P.W. and Co.) sailed for Echuca with 1000 bales of wool.

Today - Oscar and Hero (P.W. and Co.) due from Echuca.

About 6000 bales of wool have gone out of this river within the last four days.

Riverina Recorder Oct. 20 1909

TODAY, IT WOULD TAKE 60 SEMI-TRAILERS TO TRANSPORT 6000 BALES OF WOOL.

Recycled Paper: Printed on Monza Saini Recycled, a new generation premium A2+ glass coated recycled paper. It is produced with 50% recycled fibre (15% post consumer and 35% pre-consumer) with the balance (50%) being oxygen bleached virgin pulp.

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