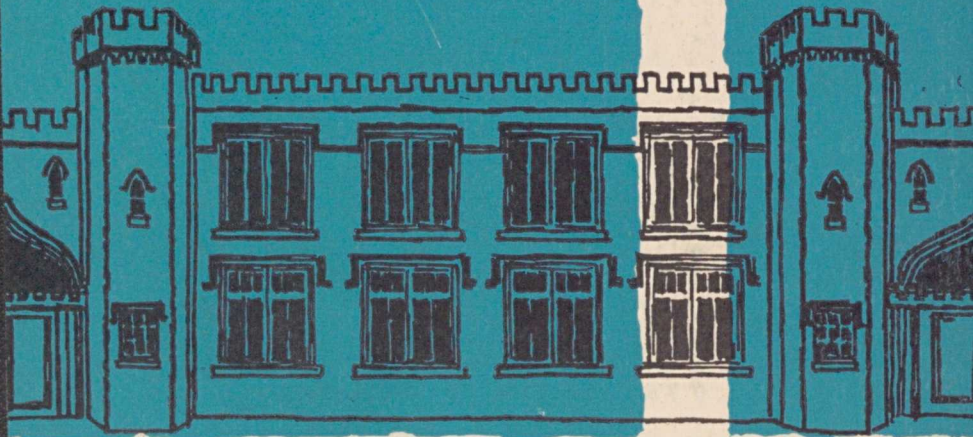




Tall Ships and Steamboats



AUSTRALIAN LANDMARKS

99/94
51

AUSTRALIAN LANDMARKS

Edited by Renée Erdos

BUREAU INTERNATIONAL	Date	1966	Reç. n.º
	Cote		Reç. n.º
			375.991(94)
	PAYS	AUSTRALIE	

TALL SHIPS AND STEAMBOATS

by
DAVID S. MACMILLAN

Illustrated by
SYLVIA PARRET



LONGMANS

LONGMANS, GREEN AND CO LTD
48 GROSVENOR STREET, LONDON, W.1
RAILWAY CRESCENT, CROYDON, VICTORIA, AUSTRALIA
443 LOCKHART ROAD, HONG KONG
PRIVATE MAIL BAG 1036, IKEJA (LAGOS)
44 JALAN AMPANG, KUALA LUMPUR
ACCRA, AUCKLAND, IBADAN, KINGSTON (JAMAICA)
NAIROBI, SALISBURY (RHODESIA)
LONGMANS SOUTHERN AFRICA (PTY) LTD
THIBAULT HOUSE, THIBAULT SQUARE, CAPE TOWN
LONGMANS, GREEN AND CO INC
119 WEST 40TH STREET, NEW YORK 18
LONGMANS, GREEN AND CO
137 BOND STREET, TORONTO 2
ORIENT LONGMANS PRIVATE LTD
CALCUTTA, BOMBAY, MADRAS
DELHI, HYDERABAD, DACCA

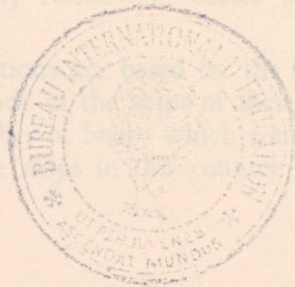
First published 1961

Registered in Australia for transmission by post as a book.
Wholly set up and printed in Australia by
NEW CENTURY PRESS PTY. LTD., 3-5 North York St., Sydney.

1966
 375.991(94) Etude
 du no. 62

CONTENTS

	PAGE
1 LAUNCHING 'THE LUMP'	7
2 MUTINIES AND ESCAPES	10
3 THE SHIPBUILDERS	14
4 WHALERS AND SEALERS	18
5 SMUGGLERS, PIRATES AND PRIVATEERS ..	23
6 THE CLIPPERS	33
7 THE STEAMBOATS	40
8 NAVIGATING THE RIVERS	51
BOOKS AND RECORDS	56



THIS is the story of how the first settlers in Australia began to build ships and sail them, and it shows how much the development of Australia depended on its ships and seamen.

Shipping and ship-building in Australia began in the face of many difficulties. Chapters 1 to 3 describe these difficulties, and tell how the first ship came to be built and launched and how proper shipbuilding facilities were established in the country.

Chapters 4 and 5 deal with Australia's growing trade with New Zealand, the Pacific Islands, China and South America up to 1825, and describe the hazards the early traders had to face—the pirates and uncharted reefs that made sea-life a hard one. They also tell of how enterprising men turned to privateering and smuggling in time of war.

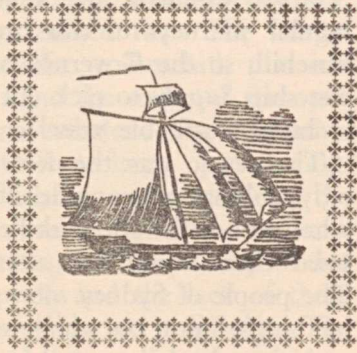
Chapter 6 describes the improvements in shipbuilding up to the 1840's, which led to the appearance of a new type of sailing ship, the *clipper*, which enabled passengers and cargo to be carried much more quickly and safely.

Chapters 7 and 8, which take the story up to the end of last century, tell of the steamboat age, which changed the seafarer's whole way of life and greatly improved communications, not only round the coasts but also on the inland waterways.

The illustrations are based on the drawings and paintings that artists made of the ships of their time on the Australian coast. A number of books which contain further information about old-time ships in this country are listed at the end.

1. LAUNCHING

'THE LUMP'



EARLY on a bright, sunny morning in the month of October, 1789, a little group of men in tattered clothing gathered by the shore of Sydney Cove as the tide came in. Around them the little convict settlement of bark huts was stirring, its population awakening to another day of toil, totally unaware of the event that was about to take place when the tide reached the high-water mark.

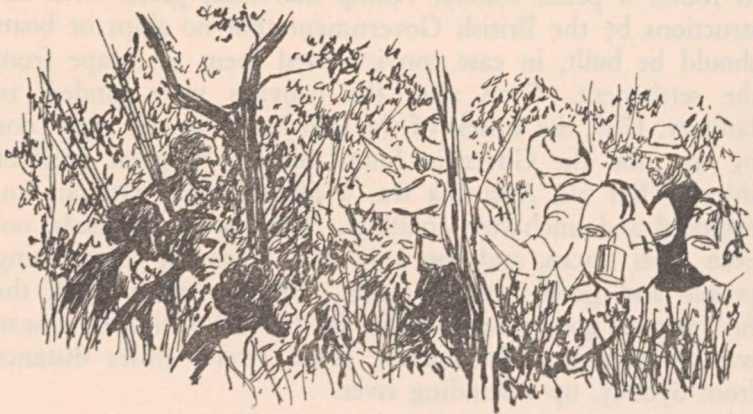
As the bell sounded for the commencement of work, at eight o'clock, a ragged cheer broke out from the convicts by the shore and a strange-looking boat slid down into the cove, along a couple of spars greased with tallow. The first ship built in Australia had just been launched, and Governor Arthur Phillip, when he next wrote home to London, reported with pride that the *Rosehill Packet* was completed.

When he set out for Australia in 1787 with his fleet of eleven ships with some 770 convicts and 212 marines aboard to found a penal colony, Phillip had been given strict instructions by the British Government that no ships or boats should be built, in case convicts used them to escape from the settlement. Soon after the convicts were landed, in January, 1788, the vessels of the fleet began to sail away, one by one, and the Governor found himself in great need of ships. After all, Australia was a great island, with an unexplored and uncharted coastline. There were no roads, not even bush tracks, and the only easy means of transporting people and goods was by water. By November, 1788, the first area of good land, suitable for the cultivation of wheat, was discovered at Parramatta, about twelve miles distance from Sydney, up a winding river.

It was essential that a good-sized boat be built to make regular journeys to this important food-growing district of Roschill, so the Governor ordered the carpenter of the convict ship *Supply* to pick out a few convicts to help him, and to build a suitable vessel.

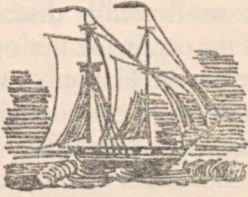
The result was the *Rosehill Packet*. She was a clumsy, ugly-looking boat, made of rough planking. The convicts who built her were unskilled, and the carpenter who supervised them could not attend personally to all the details. The people of Sydney soon got to know the vessel well, with her single mast, on which a sail could be hoisted to help her up-river when the wind was in the right quarter. Usually the big heavily-laden boat had to be propelled by means of four large oars or 'sweeps' on each side, each oar manned by a convict rower, or, if the current was strongly against the boat, by two rowers. One man who viewed the boat wrote 'from the great amount of wood used in her construction she appeared to be a mere bed of timber.' Soon, because of her appearance, she was known in Sydney not as the *Rosehill Packet* but as 'The Lump'.

Yet although many laughed and joked when they saw 'The Lump', the vessel proved very useful. Each day it would set out, laden with convicts, some of them still in their leg-irons, bound for service in the labour-gangs at Rosehill, and with stores—rum, tools, and gunpowder—for the outlying settlement. On the following day it would return with live-



stock, grain, and choice cuts of building timber for Sydney. Captain Phillip, himself a sailor, realised that 'The Lump' was only suitable for the river traffic to Rosehill, that her badly-fitted timbers would never stand the strain of the open seas, but he was glad to have her nevertheless. The only other vessels he had at his disposal were some large open rowing-boats. These were needed for fishing and patrolling the waters round Sydney, and they were too small in any case to carry many passengers or much cargo. Phillip badly needed boats for exploring the coast as well, and the lack of them made his work of governing the colony very difficult. The little expeditions he sent out to look for good land took days to cut through the tangled bush and scrub, and there was always the danger of attack by aborigines in overwhelming numbers. With seaworthy small vessels at his disposal, many of these obstacles could be overcome.

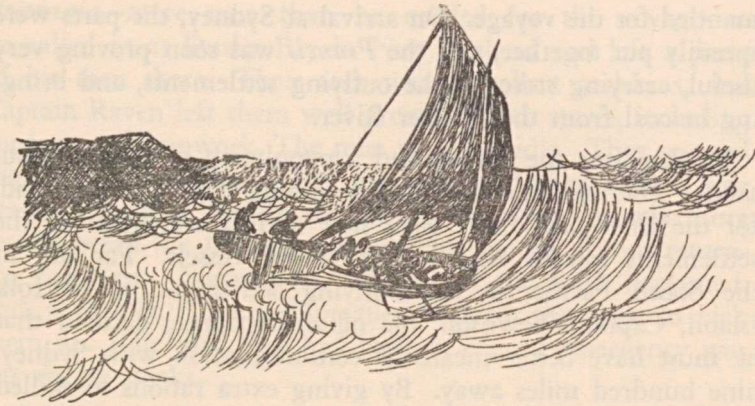
2. MUTINIES AND ESCAPES



THE officials in Britain who dealt with affairs in the Colonies were reluctant to provide ships for the new settlement in Australia. Not only did they argue that such vessels could provide opportunities for the convicts to escape, they also resented the expense of providing ships for a mere convict colony, which would never be anything more than a distant prison.

There was some justification for the fears of the officials in London, for in March, 1791, eight convicts, one of them accompanied by his wife and his two children, aged one and three years, escaped from the colony. By this time foreign trading vessels were beginning to come to Sydney, and it was from the captain of one of these, a Dutch trader, that the daring escapees purchased a six-oared boat together with a hundred pounds of flour and a hundred pounds of rice. Governor Phillip had no vessels available to follow them, and after a thrilling ten weeks voyage up the Eastern Coast of Australia and through the Torres Strait, the boat reached Batavia, in the Dutch East Indies. Although the Dutch Governor imprisoned the convicts, and eventually handed them over in chains to the British Navy, the success of the escape encouraged many other attempts of the kind in years to come.

There was hardly a year in which some desperate band of convicts did not make a 'piratical seizure' of some vessel in a bid for freedom. In September, 1797, the convicts among the crew of 'the largest and best boat in the colony', the vessel *Cumberland*, bound for the Hawkesbury River with stores, suddenly mutinied and seized the little ship, putting the officers ashore to find their own way back to Sydney



across country. This was a serious loss, and the new Governor, Captain Hunter (who arrived in 1795) immediately sent off Lieutenant Shortland in pursuit, in an open whaleboat with a small party of soldiers. Shortland failed to catch the 'pirates', but during his search he discovered the large river which he named 'Hunter' after the Governor. Near the mouth he found great quantities of coal lying by the water-side—an important supply of fuel for the colony in the future.

The *Cumberland* and her crew were never heard of again. Few convicts had any knowledge of navigation, even though some had experience in handling vessels. The escapees probably met their fate on one of the many hundreds of uncharted reefs that studded the waters off the Eastern Coast of Australia—the usual fate of daring mutineers who seized government vessels.

To prevent further seizures of ships by escaping convicts, there grew up the practice of removing the rudders and sails of ships in port, and locking them up safely ashore. But despite these precautions, convicts continued to escape by sea, sometimes in home-made boats which were mere cockle-shells.

As the little settlement grew, ships became absolutely necessary for transport, police-work and exploration. In 1792, the authorities in London relented in their policy of not permitting colonial shipping and sent out by a convict transport a little ship, the *Francis*, which had been built, then dis-

mantled for the voyage. On arrival at Sydney, the parts were speedily put together, and the *Francis* was soon proving very useful, carrying stores to the outlying settlements, and bringing in coal from the Hunter River.

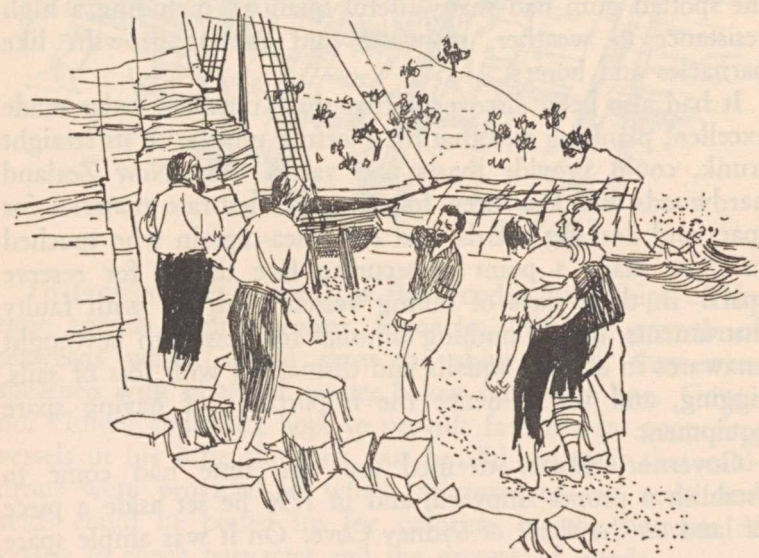
By this time the colony had a population of several thousands. The need for ships was becoming more pressing, and, for the first time, there were now skilled craftsmen in the settlements capable of building proper vessels. Far out in the South Pacific, in the outlying settlement of Norfolk Island, Captain Townson, the officer-in-charge, decided that he must have better means of communication with Sydney, nine hundred miles away. By giving extra rations to skilled convicts, and using the mighty pine trees of the island for timber, he was able to build the *Norfolk*, a staunch little sloop of 25 tons. This was the vessel used later by Matthew Flinders and George Bass on the first voyage ever made right round the coasts of Van Diemen's Land.

Similarly, the enterprising skippers of merchant vessels in Australian waters at the time showed great ingenuity in building vessels in difficult circumstances. In 1792, the merchant ship *Britannia*, commanded by Captain Raven, was sent by the authorities in Sydney to the Cape of Good Hope for food supplies. Captain Raven had a large crew on the



Britannia—more men than he needed for the voyage—so he called in at Dusky Bay in New Zealand and left a party of his men there. Their task was to collect sealskins, and Captain Raven left them well provided with stores, including cordage and ironwork. The men were not idle. They scoured the coast round Dusky Bay for seals, and they built a fine vessel, fifty-three feet in length, in case some misadventure should befall the *Britannia* to prevent Captain Raven returning for them. Fortunately, nothing of the kind happened, and, a year later, their ship sailed in from the Cape to pick them up. The ship they had built in case of emergency was left on its stocks.

Two years passed, and another trading vessel, the *Endeavour*, sprang a leak and foundered off Dusky Bay. The crew struggled ashore and were amazed to find the little ship in this remote place. Eagerly they launched her, naming her the *Providence*, and sailed back to civilisation. In ways like this, enterprising seamen and officials built vessels in spite of the official regulations which stated that shipbuilding was forbidden. In doing this, they prepared the way for others who needed ships and would build them if necessary.



3. THE SHIP- BUILDERS



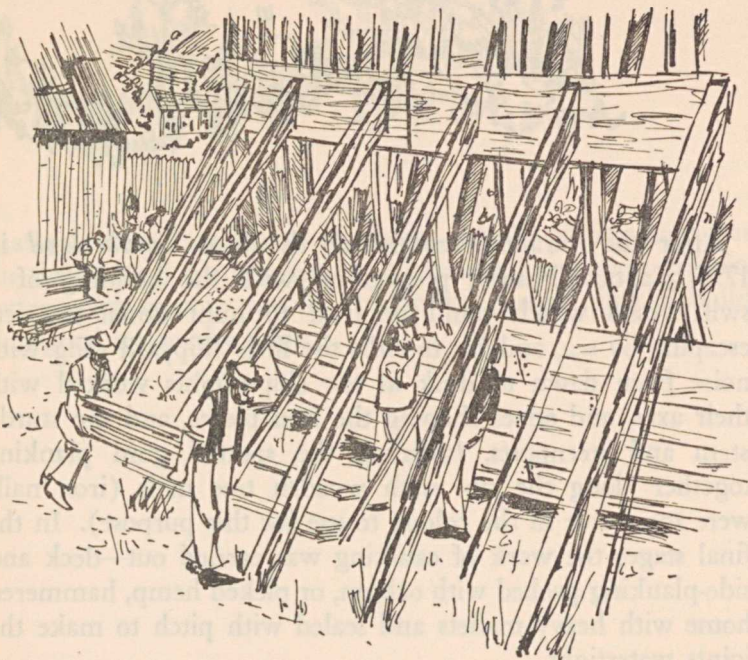
CAPTAIN JOHN HUNTER, the second Governor, arrived in Sydney in September, 1795. A naval officer, like Captain Phillip, he was determined that the little colony should have the ships it needed. If the home authorities would not provide them, the settlement would build its own. After all, there was plenty of labour available among the convict ranks—even some skilled craftsmen. There was also plenty of timber—the native gum trees, and the handsome cedar.

The first settlers in Australia had thought that the eucalypt timbers would never be suitable for ship or boat-building, but the men who built 'The Lump' had discovered that the spotted gum had many useful qualities, including a high resistance to weather, sea-water and marine growths like barnacles and borers.

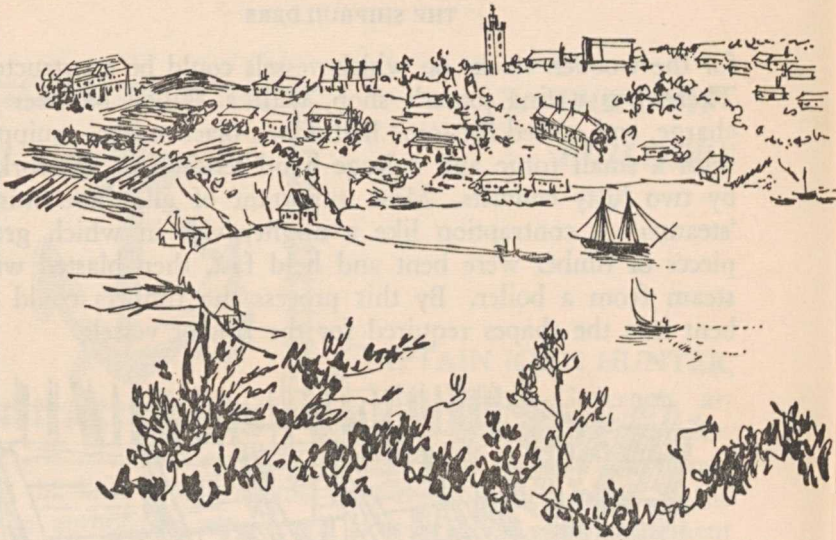
It had also been discovered that the Australian cedar made excellent planking and that the Norfolk pine, with its straight trunk, could provide masts and yards. The New Zealand hardwoods had also been found to be first-rate material for spars and decking-boards, and every sea-captain who touched in there made a point of securing fine timber for reserve spars. In those days of sailing vessels equipped with faulty instruments, it was nothing unusual for vessels to be caught unawares in sudden squalls and dismasted, with loss of sails, rigging, and yards—hence the importance of having spare equipment.

Governor Hunter deemed that the time had come to establish a proper shipyard, and in 1796 he set aside a piece of land on the shore of Sydney Cove. On it was ample space

for the wooden stocks on which vessels could be constructed. There was a fine joiner's shop, with a skilled overseer in charge, and a shed for some half-dozen blacksmiths, equipped with a small forge and a large hand-bellows, to be worked by two lusty convicts. Most important of all, there was a 'steamer'—a contraption like a mighty vice in which great pieces of timber were bent and held fast, then blasted with steam from a boiler. By this process the timbers could be bent into the shapes required for the ribs of vessels.



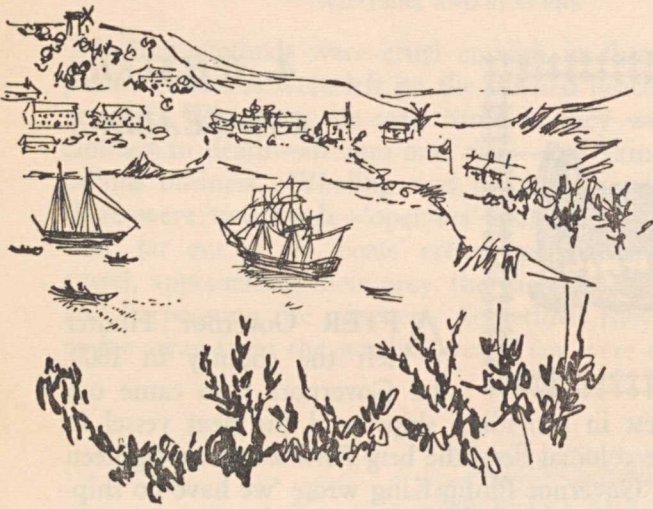
To preserve the bottoms of the wooden-built ships of the time against boring worms, barnacles, and the growth of seaweeds which would slow the ships down, they were sheathed with plates of copper below the water line. Governor Hunter could not hope to provide facilities for coppering vessels in his little shipyard, but he did see to it that cauldrons were provided in which mixtures of tar, resin and acids could be boiled up for painting on the bottoms of vessels to check barnacles and the growth of weeds.



After the 'piratical seizure' of the boat *Cumberland* in 1797, Captain Hunter pressed on with the building of a swift vessel which could be used to hunt down convicts escaping by sea, and for months the little shipyard rang with noise from dawn to dusk as the shipwrights worked with their axes, and adzes shaping the keel pieces, and the sturdy stem and sternposts, fastening the spotted gum planking together along the ribs with wooden tree nails (iron nails were too scarce in the colony to use for this purpose). In the final stages the work of caulking was carried out—deck and side-planking packed with oakum, or picked hemp, hammered home with heavy mallets and sealed with pitch to make the joints watertight.

In the early months of 1800, the Governor could see the result of all this labour lying at anchor in the Cove just below his official residence—a trim little two-masted schooner of twenty-eight tons, which was given the name *Cumberland* to signify that she had replaced the vessel pirated away a few years before.

This new addition to the government fleet was a very different proposition from 'The Lump'. Ships of many



nations were beginning to touch on the Australian coast in their search for sealskins and whale-oil, and their captains were quick to note that the colony was capable now of building good seaworthy ships.

4. WHALERS AND SEALERS

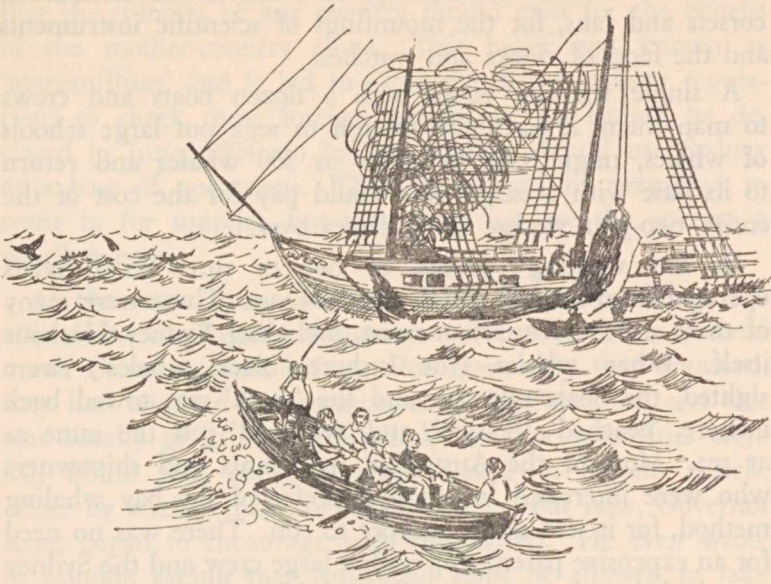


AFTER Governor Hunter left the country in 1800, the Governors who came out had less interest in providing ships, and the next vessel to be built for the colonial fleet, the brig *Portland*, took eighteen years to build. Governor Philip King wrote 'we have no shipwrights to finish her,' but the real reason for the delay in completing the ship was the amount of private shipbuilding and private shipowning that existed in the colony.

It was much easier for the government to hire or charter ships from the merchants of Sydney than to build them. In the very early days there had been no merchants, no ship-owners, but by 1804 there existed in Sydney a class of able men, men of enterprise, many of them people who had come out as convicts, like Simeon Lord, Andrew Thompson and Henry Kable.

Soon after the settlement at Sydney was founded, American ships had begun to call in for food and water supplies. These vessels were whalers and sealers, and men like Kable and Lord soon realised that fortunes awaited those who could send out ships to reap the harvests of sealskins and whale-oil that were to be found in Australian and New Zealand waters. By 1802, Sydney had its own small fleet of little schooners and sloops, all privately owned, all engaged in 'the fisheries' in competition with the Yankee vessels. Clashes were quite common between the 'colonials' and the 'foreigners' over the right to take seals on certain beaches, where the creatures gathered in thousands, and there were bitter battles on the beaches and on the high seas, with boarding-parties, gunfire, and casualties on both sides.

Sealing methods were cruel enough in themselves. Small parties of sailors were left on the isolated beaches for months on end. Whenever the seals came in they were mercilessly clubbed to death—all ages and sizes—and skinned. It was a callous business. Whaling was much more dangerous, and there were two kinds—‘open-sea’ and ‘bay’ whaling. In the first, far out at sea, boats’ crews operated from the parent vessel, approaching their prey, the cachalots or sperm whales, and harpooning the monsters. Sometimes they had to range so far away from the whaling vessel (or were dragged so far



by harpooned whales) that they were never seen again. On other occasions they were attacked by wounded whales and their boats smashed to matchwood.

If they secured their prey safely, the whales were towed alongside the parent vessel and made fast with cables so that they would not sink or drift away. Then a swarm of men with razor sharp knives mounted on long handles (‘flensing knives’) would climb over the gigantic carcasses cutting off huge strips. These were hauled on to the ship by means of ropes and pulleys rigged from the yardarms,

and the great pieces of fat and flesh were then lowered to the deck and cut up into chunks about two feet square. These were flung into vast cauldrons of iron, mounted on brickwork, with furnaces below and, by boiling, the precious oil was separated from the flesh. It floated to the top of the cauldrons and was ladled out into barrels and stowed in the hold below. The heat, the smell, and the smoke, the blood-covered decks and the toil can be imagined. While the oil was being 'rendered', other members of the crew were stripping the bones out of the carcase, for whalebone was in itself a valuable commodity, used for carved ornaments, corsets and fans, for the mountings of scientific instruments and the faces of clocks and watches.

A single whaling vessel with a dozen boats and crews to man them, if fortunate enough to seek out large schools of whales, might take as many as 300 whales and return to its base with a cargo that would pay for the cost of the entire two-year voyage thirty times over.

In 'bay whaling', groups of two or three small boats operated from selected points on the coast. There were many of these on the Australian coast, including Sydney Harbour itself. When whales (the inshore 'black whales') were sighted, the boats put out, and the 'catch' was towed back inshore, 'beached', 'flensed', and 'rendered' just the same as at sea. Most of the Australian merchants and shipowners who were interested in whaling preferred the bay whaling method, for it was much cheaper to run. There was no need for an expensive parent ship with a large crew and the Sydney men had the advantage that they could carry on bay whaling from their own coastline. No foreign whalers were permitted to use the Australian coast for this purpose.

In their search for good sealing beaches, and for schools of whales, the sealers and whalers did a great deal of useful exploration work, for very often they were going into uncharted waters, where no men had ever been before. Sometimes they passed on the knowledge they gained in this way to the authorities in Sydney, so that it could be written into the official charts, but just as often they kept their information to themselves, so that other seekers after sealskins and

whale-oil would not be able to discover where there were good beaches for seals or waters rich in whales.

It was a whaling captain, Matthew Weatherhead, of the whaler *Matilda* who surveyed and charted Jervis Bay as early as 1794. Being a man of public spirit, he passed on his charts to the government so that others should benefit from his experience.

The early governors, Hunter and King, were opposed to foreigners—Americans, French or Dutch, whaling and sealing off the Australian coast. In those days most people believed that the colonies of any country should exist for the benefit of the mother-country alone. This belief was known as 'mercantilism' and it led to Governor King making regulations to check these foreign interlopers. In future, he declared in June, 1804, no foreign whalers should use Sydney as a base of operations. They would still be permitted to come in for supplies, but they must not use the port as a whaling base.

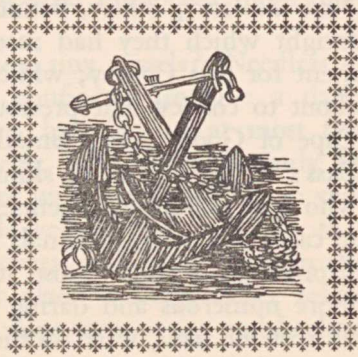
At the same time, Governor King began to change his attitude to the Sydney shipowners, who had never received much encouragement before. For every ship they obtained, they had required the permission of the Governor, and this was usually given very grudgingly, for the authorities were still afraid that convicts might escape in private vessels, either by seizing them, or as stowaways. But now, Governor King began to encourage local shipowners. He even wrote to London asking that Australian ships be allowed to take their whale-oil and sealskins to China, where a good market existed for the goods. He requested too that they be allowed to bring back from China goods that were badly needed in the Colony, especially China tea.

Unfortunately for the Governor and for the shipowners, the powerful British East India Company had the monopoly, the sole right, to trade with China, and the request was refused, but Governor King did his best to encourage the building up of the colony's shipping in other ways. He encouraged the bringing of coal by sea from the Hunter River to Sydney

by selling it cheaply to whoever would take it away. When the first load arrived in Sydney Cove he sent down to the ship two large casks of porter from his own stock as a gift to the sailors.

With whalers and sealers operating from its harbours, and a coastal trade in coal beginning, Australia was on the way to becoming a seafaring nation.

5. SMUGGLERS, PIRATES AND PRIVATEERS



THE outbreak of war with France and Spain a few years after the colony was founded helped greatly in developing Australian shipping. In the first place, there were prizes to be bought cheaply—ships of the enemy nations which had been captured at sea. In those days, anyone who captured an enemy vessel had the right to keep it for himself, or sell it as he pleased.

When, in 1800, a fine Spanish brig, the *Anna Josepha* of 170 tons, was brought as a prize for sale into Sydney Cove, Simeon Lord, the merchant, and his friend Hugh Mehan, bought her in partnership. She was the largest vessel in the colony, and the first of a fleet that Lord was to build up over the years—trading vessels, sealers and whalers.

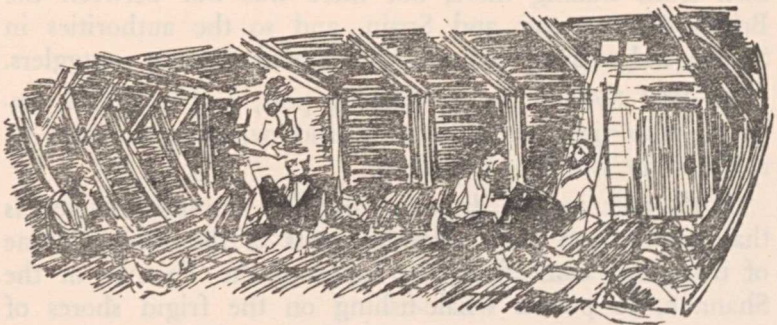
Another important result of the war was that Sydney became the base of operations for great numbers of smuggling vessels which took cargoes across the Pacific to the west coast of South America, where they traded illegally with the Spanish colonies. The Spaniards believed in mercantilism, and tried to stop the ships of any country other than their own from trading there, but there was war between the British Government and Spain, and so the authorities in Sydney did nothing to hinder the 'free traders' or smugglers.

By 1802 Sydney was a thriving port, and a French explorer who visited it in time of truce wrote in a report he made to the Emperor Napoleon:

'In the port we saw, drawn up together, a number of vessels that had arrived from different parts of the world. Some of them had come from the banks of the Thames, or the Shannon, to pursue whale-fishing on the frigid shores of

New Zealand; others, bound to China, after depositing the freight which they had received from the English Government for this Colony; while some laden with pit coal were about to convey that precious combustible to India and the Cape of Good Hope. Smaller vessels were on their way to Bass's Straits to receive skins, collected by a few individuals who had established themselves on the isles of those straits to catch the marine animals that resort to them. Other ships, stronger built than those just alluded to, and manned by more numerous and daring crews, who were provided with all sorts of arms, were on the point of sailing for the western coast of America, laden with various sorts of merchandise; those vessels were intended to carry on, by force of arms, a contraband trade on the Peruvian shores, which could not fail to prove extremely advantageous to the adventurers. Here they were preparing an expedition to carry on a skin trade with the people of the north-west shores of America; there all hands were engaged in sending off a fleet of provision ships to the Navigators, the Friendly, and the Society Islands, to procure for the Colony a stock of salt provisions. All these great maritime operations gave to the place a character of importance and activity far beyond what we expected to meet with on shores scarcely known to Europeans.'

By 1805 there were about thirty vessels owned by Sydney merchants, all busily engaged in various trades. Most of them were very small—the average size was about thirty tons, or about the same size as a large motor-launch to-day. Considering how small they were, the voyages they undertook



were remarkable. Their crews seldom numbered more than eight or ten.

How did the crews live in these tiny vessels? Needless to say, their living quarters were confined. Imagine a dark, cramped space about four and a half feet or at most five feet high, measuring about twelve feet square, lit only by a flickering tallow-lantern. There were no portholes, no ventilation, and sometimes the little vessels were so leaky that there was a constant depth of several inches of water in the cabin. There was seldom a dry place to sleep, either below or on deck, especially when the ships were at sea and heeling over under sail.

The living accommodation was poor, but the food was even worse. Since it was difficult to keep a fire going at sea, hot, cooked meals were out of the question. The staple food was hard-baked biscuit, which could be kept indefinitely in barrels and 'flare'—fat boiled flank of pork—also packed in casks with plenty of salt to preserve it. Fresh fruit and vegetables usually went bad after a few days at sea, so the diet was mainly salt pork and hard biscuit. Fresh water was strictly rationed, and there was seldom enough available for soaking the pork in, to make it palatable.

Captain James Cook and other naval commanders had devised methods of giving their crews much-needed vitamins on long voyages, such as lime juice and pickled cabbage, but the little ships that sailed from the Australian coast had nothing of this kind for their crews, and scurvy, caused by lack of vitamins, broke out regularly on the long voyages to the islands, to South America, or on sealing and whaling expeditions.

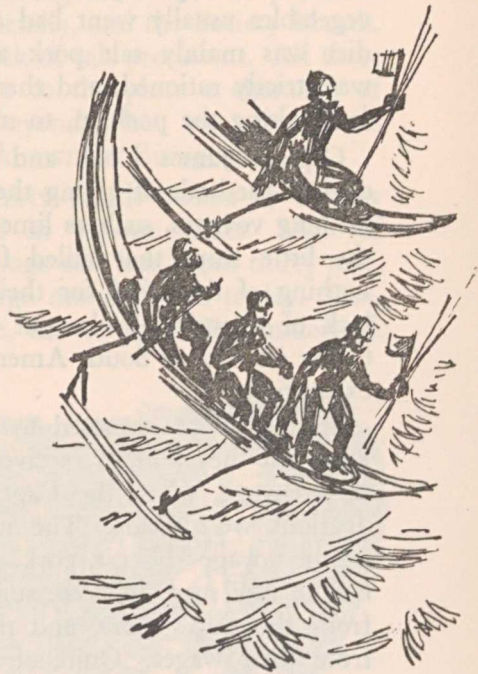
Seamen were supposed to be paid about thirty pounds a year, but they seldom received much, because at the end of each voyage, when the Captain 'paid them off' certain deductions were made. The men received only bare rations on the voyage—biscuit, pork, and a little flour and salt. They had to buy soap, tobacco, sugar, rum, oilskins, and clothing from the ship's store, and the cost of these was deducted from their wages. Quite often half of the sailor's pay was taken off in this way before he received it.

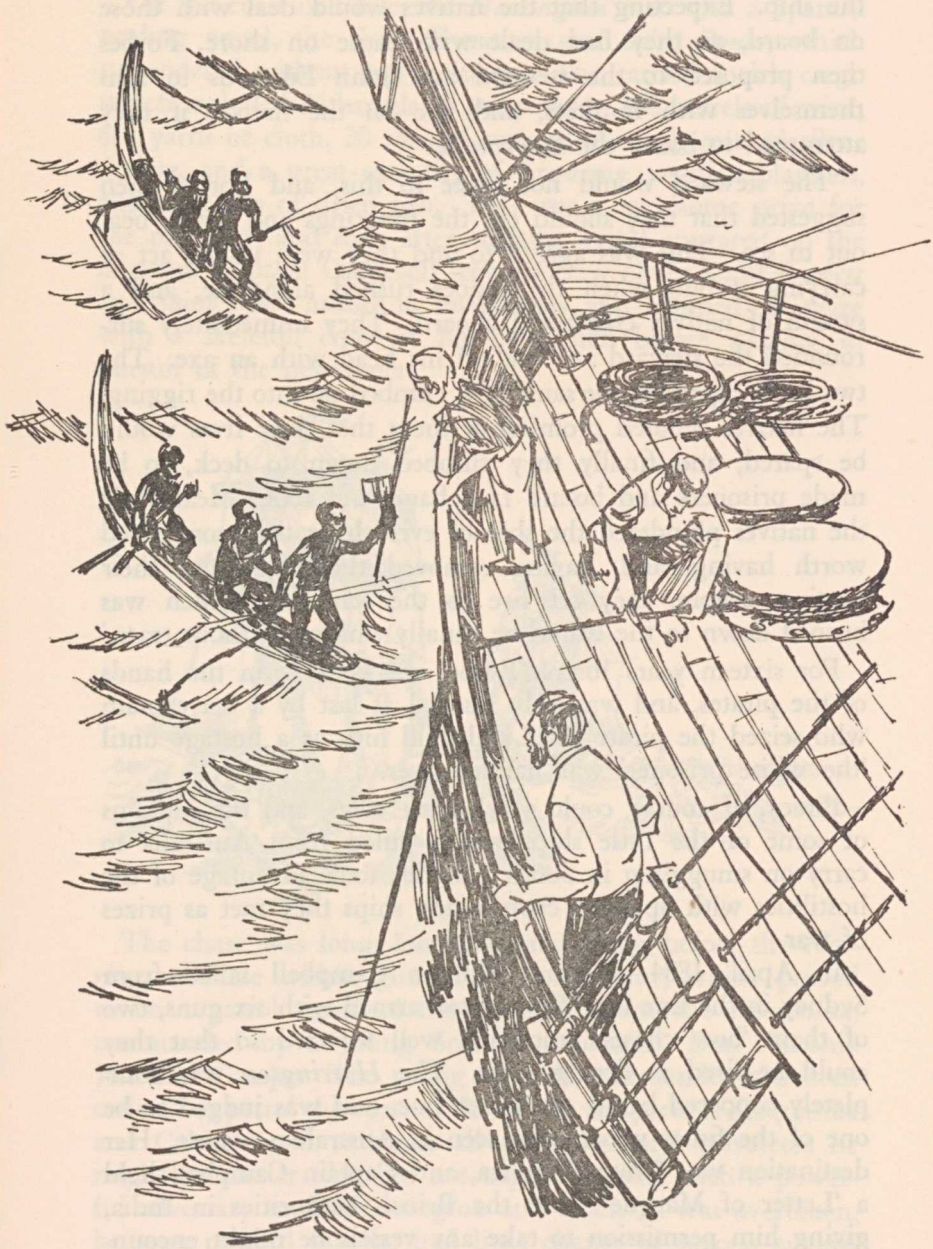
Disease was common among the seamen because of the bad living conditions. In most ships the fore-castle, right up in the bows, where the sailors lived, had only one small 'scuttle' or opening on to the deck, and this seldom measured more than two feet square. The result was a dreadful lack of fresh air and light. Tuberculosis, asthma, bronchitis and other ailments flourished.

The fate of many of these little brigs and sloops and schooners which disappeared without trace will never be known. Some perished on uncharted reefs, some were overcome by storms, and others, overloaded and leaking, simply foundered. Piracy also took its toll, especially in New Zealand waters or among the islands of the East Indies. The case of the brig *Stedcombe* was a typical example of treachery and downright piracy. Here is the personal account told by the only survivor from that ill-fated ship, written down when he had been rescued after sixteen years of slavery on the island of Timor Laut.

'His name was Joseph Forbes; he belonged to the schooner *Stedcombe* which had gone from Melville Island to Timor Laut to procure livestock. The vessel being moored off the village of Lauron, the Captain and most of the crew proceeded on shore, leaving on board the steward, a boy named John Edwards, and himself, Joseph Forbes, in charge of the ship. From some cause, the natives murdered all those who went ashore.

'As the crew did not return, Forbes took the spy-glass, and saw the bodies stretched out on the beach, the head being severed from each. Canoes were then seen coming towards





the ship. Expecting that the natives would deal with those on board, as they had dealt with those on shore, Forbes then proposed to the steward and John Edwards to arm themselves with muskets, and fire on the natives if they attempted to board the *Stedcombe*.

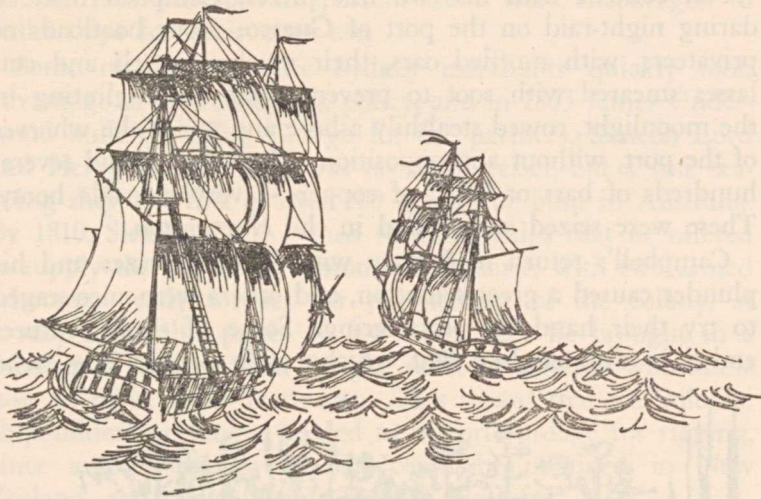
'The steward would not agree to this, and Forbes then suggested that they should cut the moorings and try to beat out to sea. This was agreed to and they were in the act of carrying it out, when the canoes rushed alongside, and a swarm of natives clambered aboard. They immediately surrounded the steward and cut off his head with an axe. The two boys, expecting the same fate, climbed up into the rigging. The natives shouted promises at them that their lives would be spared, and finally they climbed down to deck, to be made prisoners and bound fast, hand and foot. Meanwhile the natives plundered the ship of everything they considered worth having, and, having removed their loot and their captives ashore, they set fire to the schooner, which was burned down to the waterline, finally sinking without trace.'

For sixteen years Joseph Forbes was a slave in the hands of the pirates, and was only rescued at last by a sea captain who seized the pirate chief and held him as a hostage until 'the white prisoner' was handed over.

Piracy, of course, could work both ways, and the captains of some of the little ships which sailed from Australia to carry on smuggling in South America took advantage of the hostilities with Spain to capture any ships they met as prizes of war.

In April, 1804, Captain William Campbell sailed from Sydney in the fine brig *Harrington* armed with six guns, two of them 'bow chasers' mounted well forward so that they could be fired at fleeing ships. The *Harrington* was completely coppered below the water line, and was judged to be one of the finest vessels ever seen in Australian waters. Her destination was South America, and Captain Campbell held a 'Letter of Marque' from the British authorities in India, giving him permission to take any vessels he might encounter flying the colours of enemy nations.

Off the coast of Chile, the *Harrington* met with a Spanish trading vessel, the *Saint Francisco and Saint Paulo*, which surrendered without any resistance. She carried a rich cargo which included 34 barrels of gunpowder, 150 barrels of wine, 600 yards of cloth, 20 tons of wax, 6000 newly-minted silver dollars, and a great quantity of fire-arms, woollen blankets, and packages of dried fish. This was a handsome prize for the privateer, and soon after, another vessel appeared on the horizon. Captain Campbell sent the crew of the *Saint Francis and Saint Paulo* ashore in small boats, and manned the prize with a skeleton crew of his own men before starting in pursuit of the newcomer.



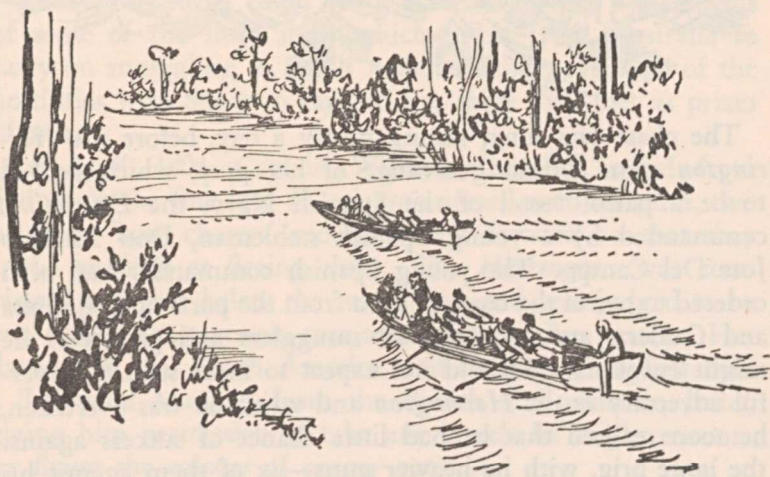
The chase was long, lasting nearly a day, before the *Harrington* came within gun-range of her prey, which proved to be a patrol vessel of the Spanish Navy, the *Estremina*, commanded by a young Spanish nobleman, Don Antonio Jose Del Campo. The young Spanish commander had been ordered to patrol the coast of Peru from the ports of Coquimba and Caldera, and to arrest all smugglers and privateers he might encounter. He did not expect to meet such a powerful adversary as the *Harrington* and when he was overtaken, he soon realised that he had little chance of success against the large brig, with its heavier guns—six of them against his

own four. In desperation, to prevent the capture of his ship, he ran her ashore and set fire to her, hoping that the powder magazine would blow up, and the *Estremina* thus saved from becoming a prize-of-war.

When Captain Campbell realised what was happening, he sent a boatload of his men to board the burning ship. The Spaniards had cleared well out by this time, expecting that the ship would explode. Fortunately the *Harrington's* men were able to check the fire and put it out by organising a human chain, along which buckets of sea-water could be passed. Next, they towed the *Estremina* afloat when high tide came.

Not content with his two fine prizes, Campbell made a daring night-raid on the port of Guasco. Four boatloads of privateers, with muffled oars, their musket barrels and cutlasses smeared with soot to prevent them from glinting in the moonlight, rowed stealthily ashore and seized the wharves of the port, without any opposition. Here they found several hundreds of bars or 'pigs' of copper—a very valuable booty. These were seized and loaded in the *Harrington*.

Campbell's return to Sydney with his two prizes and his plunder caused a great sensation, and others were encouraged to try their hands at privateering. Some of these ventures ended in disaster, like that which befell George Bass, who



had discovered the Bass Strait in 1798. Bass sailed for South America in his ship *Venus*, in February, 1803, but fell into the hands of the Spanish authorities, who confiscated his ship and sent him and his crew inland as prisoners, to work in the gold-mines. Nothing was ever heard of them again.

Yet, just as whaling and sealing helped to speed the growth of Australian shipping, so did the wartime smuggling and privateering on the coast of South America.

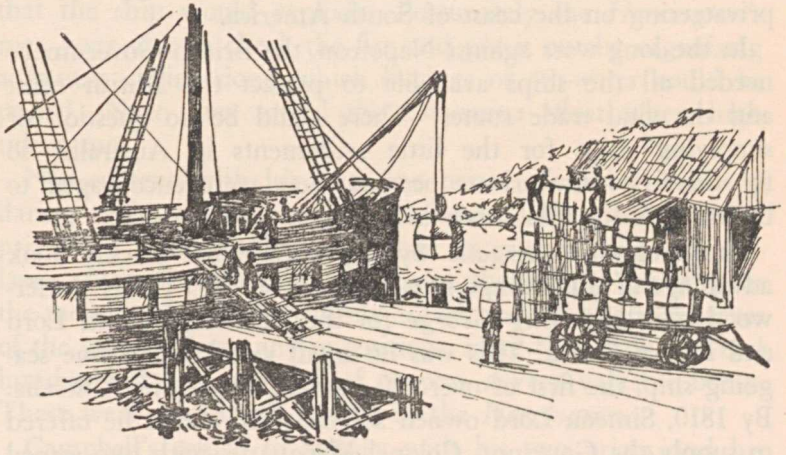
In the long wars against Napoleon, the British Government needed all the ships available to protect the British coast and the vital trade routes. There could be no question of supplying ships for the little settlements in Australia, so for the first time private persons there were encouraged to build ships for their own use.

Some of the energetic Sydney merchants quickly took advantage of this change in policy, and in 1805 James Underwood built the *King George* for the partners, Simeon Lord and Henry Kable. This was no small vessel, but a fine sea-going ship, the first of over 100 tons to be built in Australia. By 1810, Simeon Lord owned so many ships that he offered to supply the Governor, Colonel Macquarie, with two armed schooners ready for sea for the defence of the colony, at a very reasonable price. A few years later he brought in a number of Indians from Bengal, skilled craftsmen who knew how to make ropes from flax. This meant that the colonial shipbuilders no longer needed to import cordage for rigging, since ample supplies of flax could be obtained in New Zealand, and made up into rope in Sydney.

Towards the end of the War with Napoleon, the British Prime Minister, the Earl of Liverpool, decided that the ship-owners and shipbuilders and seamen of Australia had acquitted themselves so well that they should be allowed to trade more freely. An Act of Parliament was passed in 1813 which removed the colony from the area covered by the monopoly of the East India Company—thus permitting Australian ships to trade freely with India and China.

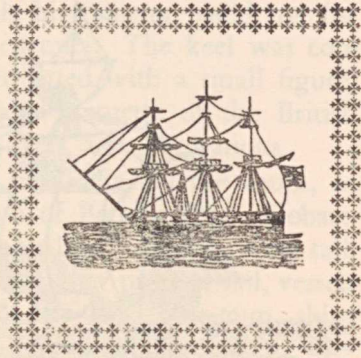
The result was an immediate increase in the number and size of the colony's ships. Soon every little settlement which

had a harbour or a navigable river was building its own vessels—the Hawkesbury, the Hunter, Hobart on the Derwent—were all building ships. By 1825, Sydney alone had 37 sea-going ships of its own, over a half of them being more than 100 tons in burthen. Their crews totalled some 500 men and boys. In that year the colony exported over 400,000



pounds of wool—an export almost as valuable to the country as the sealskins and whale-oil which had been its mainstay since the earliest days. As the country developed it was becoming clearer every day that the words of Governors Phillip and Hunter had been correct. Australia could only progress if there were enough ships and sailors to serve it.

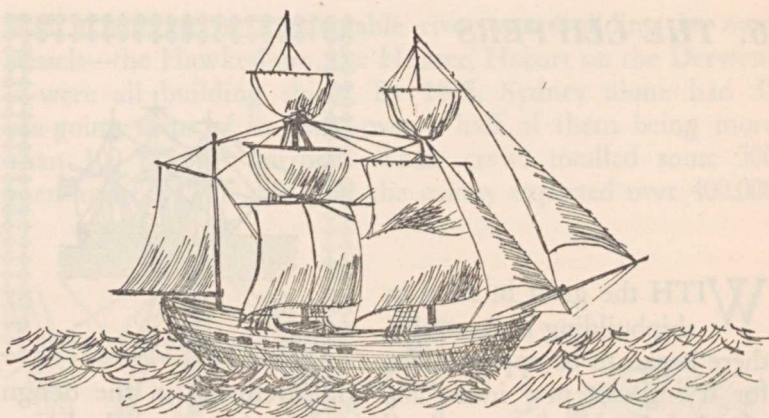
6. THE CLIPPERS



WITH the great increase in shipbuilding in Australia, there began to be opportunities for trying out new ideas, and improvements in the design of ships. For many years the lines of foreign vessels had been admired, since they were usually much more graceful than those of British vessels. Even the American whalers which touched in on the Australian coast were long, trim vessels, with less beam in proportion to their length than British ships. When Captain Campbell brought in his prizes from the coast of Peru, people flocked to see their sheer lines and tall raking masts.

The reason for the clumsy proportions of British ships lay in the government regulations which stated that all ships should pay taxes or tonnage dues, according to their measurements. The length of the ship was the main thing taken into account in working this out, and no attention was paid to the depth of the ship. Naturally this encouraged many shipbuilders and shipowners to build short vessels, very broad, and very deep, so as to avoid tonnage dues. This led to the ships being very slow, and some were even unseaworthy, since greedy owners made the hulls so deep that the vessels were top-heavy.

After 1820 the British Board of Trade, which was responsible for the country's shipping, realised what was happening, and the rules were altered so that it became impossible to work such 'tonnage frauds' by deliberately building short, deep vessels. This led to a revolution in shipbuilding. The stress was now laid on speed and seaworthiness rather than on cargo-carrying capacity, and a new type of vessel began to appear—the 'clipper'—a long, lean ship, with sharp bow



and graceful lines. The earlier ships were usually three or four times longer than their breadth, but the clipper's length was anything from six to eight times its breadth, and this made it much faster.

At the same time, improvements were made in the sails and rigging. Lighter spars were used, and taller masts were made possible because they too did not need to be so heavy, or so strong, to carry the spars. The clippers were much more attractive in appearance than the tub-like vessels which preceded them, and some of the Australian builders were soon turning out lovely little clipper ships in their yards. One of the earliest was a beautiful little schooner, the *Prince Regent*, which was built in the Government Dockyard in Sydney in 1819, at the order of Governor Macquarie. It was built as a gift from the Prince Regent, who then ruled Britain, to the King of the Sandwich Islands out in the South Seas. Macquarie was anxious to make friends with the Island King, so that he and his people would be friendly to traders from the colony. No expense was spared in the construction of the ship.

She was built of spotted gum planking, and the fine timber from New Zealand was used for her keel and ribs. The deck-planking was of red cedar and the cabins were lined with the same wood. All the metal fittings were of brass, whose glitter would delight the native ruler, and she was equipped

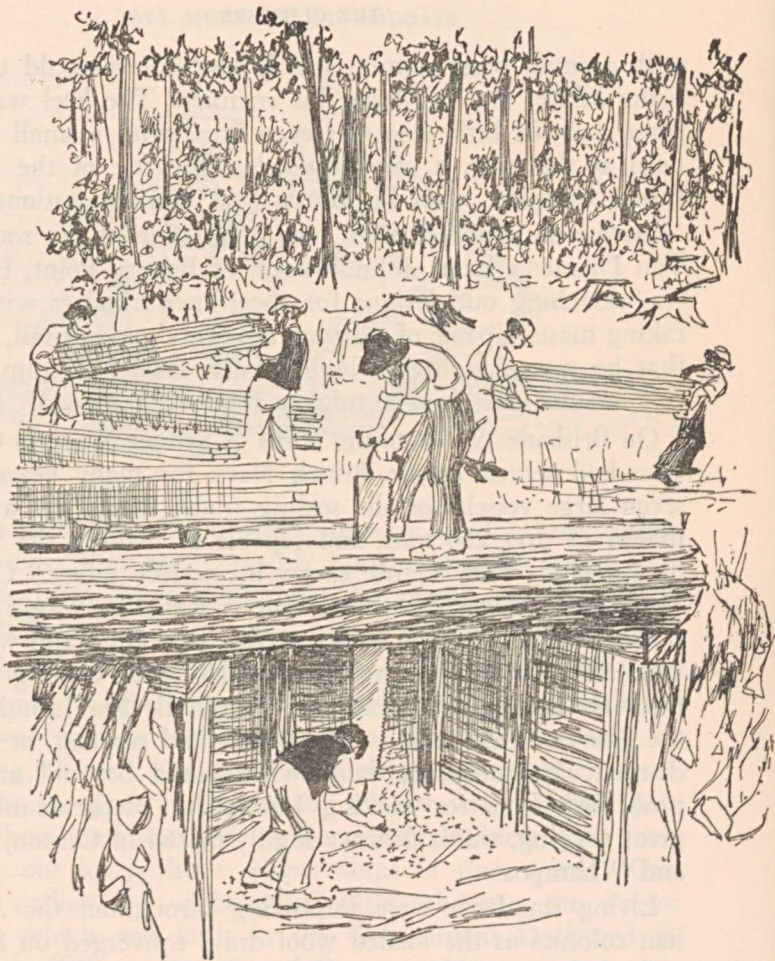
with a small brass cannon which his majesty could use for firing salutes and terrifying his enemies. The keel was coppered and the little ship was even fitted with a small figure-head at the bow, a carved wooden statuette of the British Prince complete with his court dress and decorations.

Private shipbuilders were also busy. Far to the south, in Van Diemen's Land, John Watson of Battery Point, Hobart, was sketching out designs for sheer-lined clippers with tall, raking masts capable of carrying a mighty press of sail, vessels that he was planning to build of the local blue-gum, ships that would earn him a mighty reputation abroad.

On Brisbane Water, to the north of Sydney, Captain Grono, who had served in the British Navy for many years, built seven large vessels for the sealing trade. Each was a three-master of over 250 tons, and capable of making the voyage to England with a full cargo in perfect safety. On the Hawkesbury River there were dozens of smaller vessels on the stocks, building for the coastal trade, for sealing and whaling ventures, and for two new trades that were coming to the fore—the sandalwood trade in the South Sea Islands, and the Torres Strait trade in pearl shell and trepang, or beche-de-mer. The aromatic sandalwood could be sold at great profit in China for making Joss sticks. Beche-de-mer, the great sea slug, was a delicacy highly prized in Canton, Amoy and Whampoa.

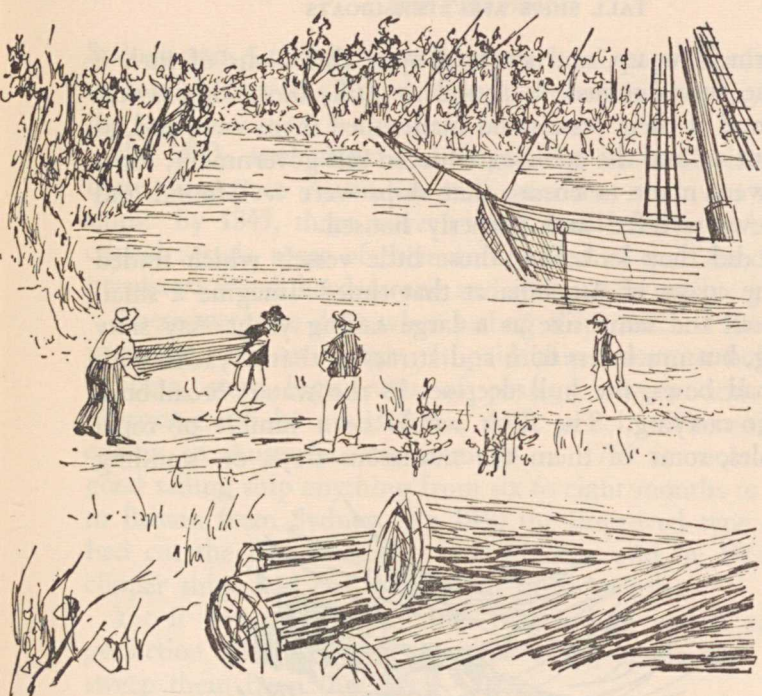
Living standards were improving throughout the Australian colonies as the loaded wool drays converged on Sydney and on the new settlements at Port Phillip and Moreton Bay. People wanted larger, better houses, and handsome, durable furniture. This led to the growth of yet another flourishing trade—that of the cedar-getters, who sailed into new-found, unexplored rivers, like the Manning, the Macleay, the Clarence, Richmond and Tweed, in search of the forest giants that towered among the thick gum-scrub of the river banks.

In their little vessels, the cedar-traders pushed up-river to the limits of navigation, till the keels were jammed fast in the shingle of the shallows. Then, using their vessels as a base of operations, they sought out likely trees, felled them,



and straddled them over saw pits. With great double-handed saws, six or eight feet in length, they would work at cutting the trunks into planking, one man standing in the pit below, the other on the top of the log. The planks were loaded on the craft for shipment back to civilisation, though sometimes ships or rafts were built on the spot with the raw, newly-cut wood, and sailed down river and home.

These Northern Rivers, as they were called, were so rich in good timber that it was not long before shipbuilding was flourishing along their banks. Captain Alexander Newton

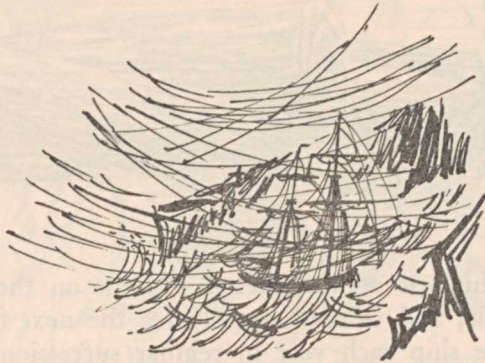


established himself at a well-chosen point on the Manning River in 1838, and worked steadily for the next forty years, building one ship each year in regular succession. By 1848, Melbourne, the new town named in 1837, had its shipyard, and by 1855 South Australia and Western Australia were also building vessels. The figures contained in the official reports of the time show the increase very clearly. In 1835, two hundred and sixty-nine ships left ports in New South Wales, which then included what we now call Victoria and Queensland. By 1844, the number of ships departing from the same ports had risen to five hundred and seventy.

Some of the shipowners were hard men, who sent their vessels to sea with insufficient food for the crews on long voyages. Some even sent out unseaworthy vessels because they grudged the cost of overhaul and repairs. In some of these 'coffin crates', as the sailors called them, the crews had to man the hand-pumps night and day to keep the ships afloat.

If a storm blew up, and strained open the seams of such a craft, she was doomed to founder. Still, most shipowners were proud of their vessels and maintained them well, and, as time went on and the colonies achieved self-government, regulations were made to ensure that ships were well-found and their crews well-fed and properly housed.

What did they look like, those little vessels which traded along the coasts of Australia at that time? Imagine a small ship, about the same size as a large sailing yacht—say sixty feet long, but much less trim and attractive than a yacht, with full, broad bows, the hull deep-set in the water, broad-built for cargo-carrying. The deck would be a jumble of ropes and cables, some of them the numerous stays, or 'standing



rigging' which held the masts firm, and others the 'running gear' by which the wooden yards supporting the sails were raised and lowered, turned and dipped. There would also be chain cables for the anchors, capstans and windlasses round which cables and ropes could be wound for leverage, as well as one or two small boats, hatchways, steering-gear (either wheel or large tiller), and bales and casks of deck cargo in addition—a confusing sight.

Such a vessel was the little 46 ton cutter *Thomsons* which sailed regularly between Sydney and Adelaide for about fifteen years, touching in at Port Phillip and many other ports *en route*, discharging and taking on a few barrels or bales, or some sheep, or even a horse or two. In stormy weather the *Thomsons* took 90 days to make the voyage between

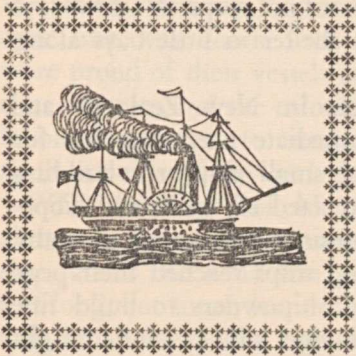
Sydney and Adelaide, allowing for several stops of a few days each when she was forced to seek shelter in little bays along the coast.

By 1840, settlement had begun in New Zealand, and there, just as in Australia, an immediate need was felt for ships. By 1845, there were several small shipyards building coastal vessels, some of them constructed of the famed Topohotukawa wood, hard, strong and resistant to marine growths.

These were the days when sailing ships reached their peak in beauty and in design. It paid shipowners to build fine clippers, since high rates of passage money and freight charges could be asked for a swift vessel. When the first colony in Australia was founded in 1788 it took even a good sailing ship anything from six to eight months to voyage to Britain from Sydney. By 1840 the improved type of ship had cut the time down to four months, and by 1860 crack clipper ships had cut it down to three months.

Yet it was just at the time that sailing vessels came to perfection that experiments were being made that would sweep them from the seas.

7. THE STEAMBOATS



THE thirty-first day of March, 1831, was an important day in Australian history, for it witnessed another launching, and one quite different from any that had gone before. The *Australian* newspaper described the exciting scene:

‘Yesterday the first steam vessel that ever appeared in this country was launched amidst colours flying, and the acclamations of some hundreds of spectators in boats, whom the novelty of the scene drew to the spot. . . . This specimen of naval architecture does infinite credit to Mr. Millard, the designer. She is a beautiful model and appears to be well constructed for a clipper for light draft of water. She will carry a ten horse-power high pressure engine. Her fastenings are copper.’

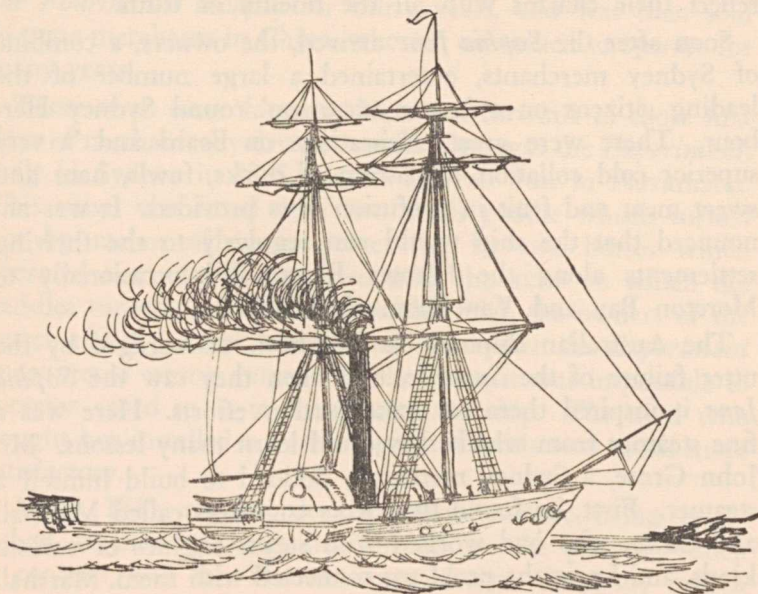
This new steamer, the *Surprise*, was a very small vessel. She was only eighty feet in length, and her top speed was about four and a half miles an hour. She had been designed and built for river and harbour traffic, and was totally unsuitable for the open sea. Her owners, the Smith brothers, had caused her to be built at Neutral Bay, in Sydney Harbour, more as an experiment than anything else. News had been reaching Australia of the great progress being made elsewhere in steam navigation, of how the new steamships were cutting down passage-times, of how they could proceed through any weather, regardless of the direction of the wind.

As early as 1812, Henry Bell, the Scottish inventor, had sailed his little steamship, the *Comet*, down the River Clyde, and Robert Fulton, an American engineer, had operated his steamship *Clermont* on the Hudson River in 1806. Steam

engines for driving flour-mills were known in Australia as early as 1815 when Governor Macquarie gave a grant of land to William Dixon, on which to set one up, but until the Smith brothers built the *Surprise* no-one had considered the idea of steamships seriously.

The little steamer was fitted with two masts and with sails, since it was considered too risky to trust to mechanical power alone, and there were high hopes that she would be successful. Unfortunately, the *Surprise* proved a dismal failure. The two circular paddles, one at each side, were far too large for the little vessel, and when the furnace was stoked up, and the engine going full blast, she shuddered and rolled from side to side in such alarming fashion that the passengers feared an explosion. Disappointed in their venture, the Smiths removed the steam engine from the *Surprise* and sold it to the owner of a steam flour mill who wanted it to replace his machine. The clumsy paddle-boxes were then stripped off the hull and Australia's first steamship became a sailing vessel.

Yet it was not long before Australia had successful steamships. On 15th May, 1831, the fine large steamship *Sophia*



Jane entered Sydney Harbour, with smoke pouring from her lofty smoke-stack, paddles churning, and not a scrap of sail. On her way along the coast she had caused terror among both whites and aborigines, who had never seen the like. A glance at this fine ship was enough to convince the Sydney folk that here was a very different proposition from the poor little *Surprise*. The mighty engine could generate no less than fifty horse-power, to obtain a top speed of over nine miles per hour. The machinery had been skilfully designed and built by Barnes and Miller, both pupils of the great James Watt, who had invented the improved steam engine, fitted with a condenser.

The comfortable accommodation on board startled the Sydney folk. One of them wrote: 'The dining-room is a noble apartment, being arranged with the most ingenious regard to utility and comfort. The accommodations between decks are truly admirable. The state cabin is appropriated exclusively to the ladies. The fair sex are always entitled to the best, and certainly their claim is fully conceded on board the *Sophia Jane*, their apartment having every convenience they could desire, together with superb looking-glass panels, which reflect their charms with all the fidelity of truth.'

Soon after the *Sophia Jane* arrived, the owners, a combine of Sydney merchants, entertained a large number of the leading citizens on a 'water excursion' round Sydney Harbour. There were great celebrations on board and 'a very superior cold collation, consisting of ducks, fowls, ham and sweet meat and fruit in profusion' was provided. It was announced that the ship would run regularly to the thriving settlements along the Hunter River, and occasionally to Moreton Bay and Van Diemen's Land.

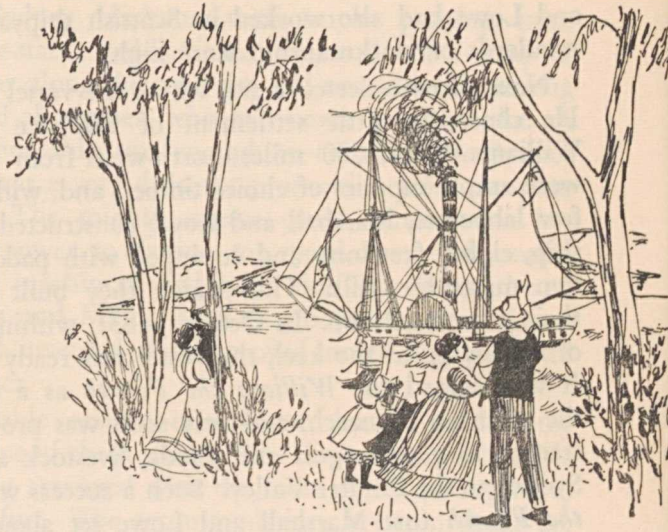
The Australian shipbuilders had been discouraged by the utter failure of the *Surprise*, but when they saw the *Sophia Jane* it inspired them to make further efforts. Here was a fine steamer from which they could learn many lessons. Mr. John Grose, a Sydney merchant, decided to build himself a steamer. First, he found two Scots engineers called Marshall and Lowe, who had worked with steam engines of various kinds, and knew the problems connected with them. Marshall

and Lowe had also worked in Scottish shipyards, where the standards of workmanship were high.

Next, Grose selected a site where the vessel could be built. He chose the little settlement of Clarence Town, far up Williams River, 200 miles north-west from Sydney. Here were ample supplies of choice timber, and, with the help of a few labourers, Marshall and Lowe constructed a sturdy little ship, eighty feet long and equipped with paddle wheels and two masts for sails. The engine they built themselves, in their own workshop. In October, 1831, within a few months of the laying of the keel, the vessel was ready for launching. It was named the *William the Fourth* as a compliment to the reigning Monarch, and very soon was proving its worth, transporting passengers and goods, livestock and wool from Sydney to the Hunter Valley. Such a success was the *William the Fourth* that Marshall and Lowe set about building another vessel, the *Ceres*, nearly twice as large as the first. In all their vessels, the hulls were built of flooded gum and iron bark, with decks of Norway pine. The solid construction of these ships enabled them to ground on river sand-bars without damage, and ensured long lives of service. The *William the Fourth* ran steadily for thirty years, and was then sold to some merchants in China, where it continued to operate for many years.

There were some fantastic ideas put forward in those first days of mechanically-driven vessels. One was the *Experiment*, built in Sydney in 1835 for the up-river run to Parramatta. This vessel was fitted with two small paddle wheels turned not by means of engine-power but by two horses which operated a treadmill connected with the axles on which the paddles turned. After a two-months' trial, the owners of the vessel sold it, because it was found that when the *Experiment* encountered strong currents in the river, it was impossible to increase speed so as to manoeuvre the ship. The man who bought her installed a steam engine and this was much more satisfactory.

About 1840, regular steamship routes were being established, usually by companies formed for the purpose. Such a concern was the Hunter River Steam Company which



started to operate sailings from Sydney to the Hunter daily, with three steamers purchased in Britain, the *Rose*, *Thistle*, and *Shamrock*. A rival company was set up soon after by some Hunter River settlers who considered that the service was not good enough. They built a fine new steamer, the *Victoria*, at Raymond Terrace on the Hunter, and Australia witnessed its first exciting steamboat races. On several occasions the *Victoria* and the *Rose* raced along the coast, belching clouds of black smoke, all sail set, while the passengers lined the rails and cheered with excitement. Wagers were laid in Sydney and Newcastle on which ship would reach port first, and feeling ran high because the *Victoria* after all, was an Australian built vessel, and the contests were between 'currency' (or Colonial) on one hand and 'sterling' (or British) on the other. Unfortunately, for those who backed the *Victoria*, the *Rose* or the *Thistle* usually won, for their engines were more modern, and the steam pressure could be increased by manipulating the valves.

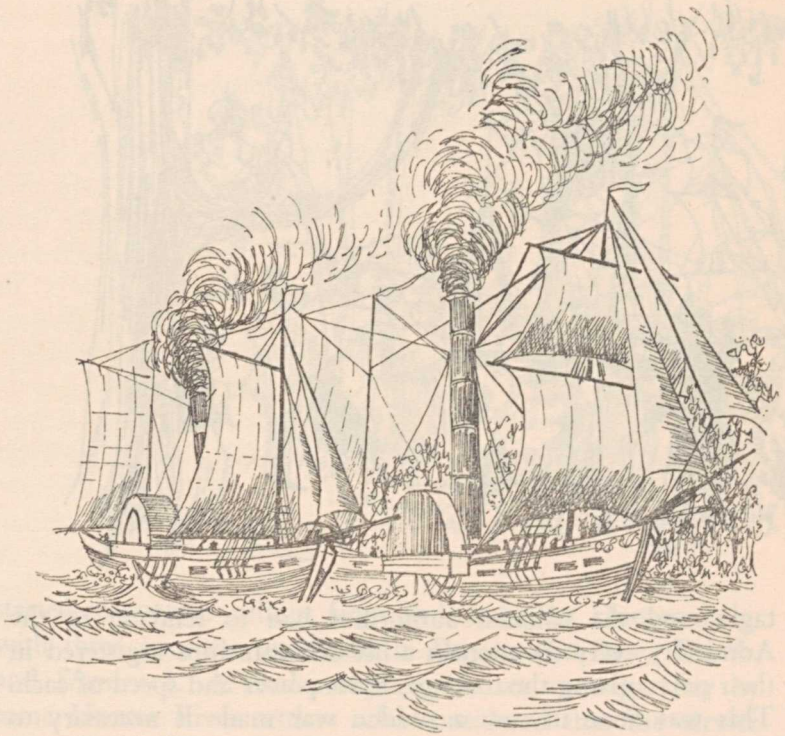
Even the British Navy, always slow to adopt new methods, was beginning to realise that steamships had many advan-



tages, and the colonial authorities had to send in to the Admiralty every six months a list of steamships registered in their ports, giving the tonnage, horse-power and speed of each. This was done in case a sudden war made it necessary to convert the steamers to naval vessels or troopships.

Although many improvements were coming about due to the increasing use of steamboats, the old dangers remained. As late as 1835 the convict vessel, *Neva*, loaded with women prisoners, struck an uncharted reef off King's Island, and broke up within a few minutes. Attempts to lower the boats were in vain, as the seas were too great, and out of a total of 251 persons (including 159 women and 55 children) only six women and nine members of the crew survived, after fighting their way on small rafts to the bleak shores of King's Island.

In a broadsheet published soon afterwards, the writers demanded that the coasts be properly surveyed and charted. 'We have a colonial Marine,' they wrote, 'that is now to be supported by the Colonists, at an amazing cost, and ought to be employed in the *only way* in which the Colony can be



benefitted by its services. One of the vessels might, with much advantage, be employed in surveying the entrances into the Derwent and Bass's Straits. The loss of *three hundred and fifty eight human beings* by shipwreck, in less than three months, is conclusive proof of the necessity to prevent such awful shipping disasters for the future by instant surveys of our coasts.'

* * *

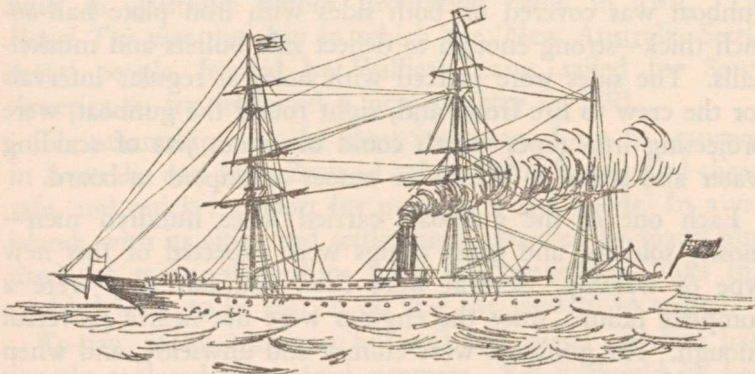
By the year 1850, the bulk of the passenger traffic round the Australian coast was being carried on by steamers, but the coastal sailing vessels were still carrying most of the cargo. At Brisbane the little steamer *Hawk* was being built to carry passengers up-river to the thriving township of Ipswich. Steam power was enabling ships to go places where sailing vessels could never have penetrated. But though the growth of Australian shipping had been great in the first

sixty years of the country's existence, it was slight compared with the boom in shipping that followed the discovery of gold in 1851. The population of Australia rose from 400,000 in 1850 to 1,145,000 in 1860. To cater for the influx of people and to supply the goldfields and the growing cities, more and more ships of all kinds were needed.

On 3rd August, 1852, the giant Peninsular and Orient Line steamer *Chusan* arrived in Sydney—the first steamship to make a commercial passage to Australia. She took only ten weeks to steam from Southampton to her destination. The country was becoming so important now that it merited a regular steamship service, and in 1859 this was established.

New developments in shipbuilding were coming in quickly. Iron hulls were replacing wooden ones, and the clumsy paddle-wheels of the early steamers were giving way to propellers, which increased the speed and made the ships more manageable. Ships were getting bigger, too. Back in 1820, a ship of 200 tons was considered a large vessel in Australia, but by 1850 vessels of 500 or 600 tons were considered to be of average size. The mail steamers were two or three thousand tons in displacement.

In 1852, in the great ports of Sydney and Melbourne, progressive merchants and industrialists were providing facilities for docking, repairing and building the big new iron ships. Thomas Mort was planning a great dry-dock, over two hundred and fifty feet long, to be hewn out of the solid



rock at Balmain, near Sydney. It would be large enough to accommodate the largest steamer of the time. Nearby, the newly formed Australasian Steam Navigation Company was building great workshops, complete with foundries and engineering works, and a patent slip on which vessels could be pulled by steam power right out of the water for repair and refitting. The company was bringing out hundreds of skilled shipyard workers from Britain to man its new dockyard, including sixty experienced mechanics who could manufacture complete engines for vessels. By 1863 the yard was producing large iron steamers as good as those built in Britain.

When the Maori Wars broke out in New Zealand, the government placed an order with the company for a whole fleet of iron-clad gunboats, to be used in river warfare. These were unusual ships, designed to penetrate up the New Zealand rivers into very shallow waters. The first of them to be built, the *Waikato*, was propelled by means of a great paddle wheel at the stern, so that the wheel would be in a protected position. If the vessel hit a rock or a sandbar, the strongly-built bow would take the impact and the paddle wheel, a huge contraption of wooden and iron slats, would be safe. On the deck was mounted a 'cupola', or gun turret, seven feet in diameter. This was made of plate-iron, an inch and a half thick, and contained a small gun projecting through a slit in its side. Right along her length of 140 feet the gunboat was covered on both sides with iron plate half-an-inch thick—strong enough to deflect rifle bullets and musketballs. The sides were pierced with holes at regular intervals for the crew to fire from, and, right round the gunboat, were projecting iron pipes which could blow out jets of scalding water and steam if Maoris in canoes attempted to board.

Each one of the gunboats carried three hundred men—mostly soldiers, and great things were expected of this new type of warship. Several were tried out, but they were a complete failure, since the engines were not nearly powerful enough. The gunboats were clumsy and unwieldy, and when the swift river currents caught them they were spun round

like pieces of driftwood and became completely unmanageable.

There were other strange craft to be seen then, such as the vessels built by Thomas Chowne of Pymont, in Port Jackson. Chowne ran a shipyard and a breaking-up yard in conjunction with it. He specialized in taking the engines out of old vessels and putting them into new ones—the usual thing to do, since the wooden hulls of steamers were worn out far more quickly than the well-made engines which propelled them. On one occasion, Chowne launched a vessel called the *Ops* and when he was asked what the name meant, he explained quite proudly that it stood for 'Old Pieces of Ships', a true description since every part of the new ship had come from the breaking-up of another.

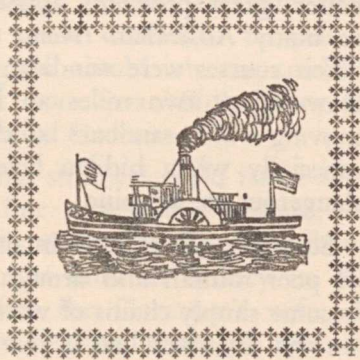
Right up to 1890, most of the cargo carried round the Australian coast was shipped in sailing vessels, and there are still one or two small survivors of the great days of sail. After 1890, however, it became harder for the sailing vessels to compete with steamers which could guarantee the delivery of goods by a certain date. As railways spread over the country, there was yet more competition, felt even by the steamers, and this gave the death-blow to the sailing ship just as it was being perfected in design. On the Northern Rivers of New South Wales, some shipbuilders kept on producing fine large sailing vessels in spite of the advantages of steam. One famous ship built there was the *Royal Tar* of 600 tons, constructed on the Nambucca River in 1876, probably the largest ship built in Australia before Federation came in 1901. The *Royal Tar* was the ship in which the 'New Australia Settlement' people, headed by William Lang, sailed for South America to try to found a new country in 1893.

The steamship was the most important form of transport in Australia and New Zealand before 1900. It provided cheap, safe, and quick transport for passengers and goods. In a vast island, with its cities and settlements separated by many hundreds of miles, steamships were the connecting links that enabled trade to be carried on and the land to be settled.

To-day, motor transport by road and diesel railways have largely replaced the coastal steamers. Yet it should be kept

in mind that the steamers had one very great advantage. The coal on which they ran was available in great quantities in Australia itself. To-day, all the oil and petrol used in the country must be imported from abroad. In the steamboat age, Australia could build and repair its own ships since there was plenty of iron, and fuel them with Australian coal—in other words, the country was not dependent on anyone else for its chief means of transport.

8. NAVIGATING THE RIVERS



BOATS were used from the earliest days of settlement in Australia to explore the rivers and travel along them. As we have seen, the first ship built in the country, 'The Lump' (or *Rosehill Packet*) was a river-boat, and it was the cedar-getters in their little sloops and cutters who had opened up the Northern Rivers of New South Wales.

At the time when steamships came into use, about 1830, explorers had just discovered the vast river system of the Murray and its many tributaries. Back in 1815, George Evans, exploring beyond the Blue Mountains, discovered the sources of the Lachlan and Macquarie Rivers. In 1824, Hamilton Hume and William Hovell found the mighty river Murray on their overland journey from Sydney to Port Phillip. In 1829, Captain Charles Sturt, hearing from the aborigines of a great river, pushed South West in a small boat, down the Murrumbidgee River, until he came to the point where the Murray and the Darling met.

Men of foresight could see that this vast new area, watered by the largest rivers discovered so far in the continent, must have a great future. It consisted of some half-million square miles of country, excellent for grazing.

Transport was the problem. How were settlers and their belongings to be carried into the new-found territory, and how could its products, chiefly its wool, be brought to the coast, easily and cheaply?

The rivers themselves seemed to offer a solution, but as more settlers built their homesteads by the Murray, the Darling, and the Murrumbidgee, and got to know the rivers

better, great problems appeared. In the first place, unlike so many Australian rivers, these ran through flat country. Their courses were winding, and their rate of flow was very slow—about two miles an hour on the average. In slow-moving water, sandbars build up very quickly—and sandbars, especially when hidden below the surface, would be very dangerous to shipping.

Secondly, the rainfall in the area was very slight. In times of poor rainfall and drought the rivers would dry up, and become simply chains of waterholes. Ships would be stranded on the dry river bed if this happened.

The Governor of South Australia, Sir Henry Fox Young, was very interested in these problems. He saw that if navigation could be begun on the great rivers, South Australia would benefit greatly, for the whole river system flowed into the sea to the east of Adelaide, the capital. If river vessels could open up a route along the Murray, the settlers in the vast river area would look to Adelaide for their supplies, and send their produce there.

In 1849 the Governor set out in person, with a small party of surveyors and officials, and examined the Murray River right along its whole length from the sea to the point where the Murray and the Darling met, a distance of over three hundred miles. For weeks they moved upstream in two large open boats, rowed by stalwart aborigines, checking the depth of the main course, noting the sandbars and the currents. Sir Henry came to the conclusion that the river would be navigable for steamers, and, in August, 1850, he issued a proclamation:

'The Legislative Council has agreed that as and from 1st October, 1851, a bonus of £4,000 will be equally divided and paid to the first two iron steamboats of not less than forty horse-power, that shall successfully navigate the River Murray from Goolwa, (near the mouth) to the Darling Junction.'

There was great excitement when this offer of rewards was proclaimed and Captain Francis Cadell, who had been thinking about the possibility of trading on the river for some years, decided to inspect it closely. He bought a folding canvas

boat and hired four gold-miners as a crew. The little vessel leaked badly, and had to be made watertight by pouring 'hot fat, left over after cooking the meals' into the cracks in the canvas. The party set out from Swan Hill, far up the Murray and sailed safely down to Goolwa.

This trip convinced Cadell that steamers could travel along the river, and he ordered a fine new paddle-steamer, flat-bottomed so as to be able to run aground on sandbanks without damage. The vessel was built in Sydney in 1852 and named *Lady Augusta* after the Governor's wife. In August, 1853, she set out from Goolwa, towing a specially-built barge.

Meanwhile, another man of enterprise had entered the competition for the reward. William Randell was the son of a settler who held land near Mannum, on the Murray. As a very young man, Randell was interested in the idea of operating a steamer on the river, but his father would have nothing to do with the scheme. Still, he was looking for an occupation for his sons, so he built a steam flour-mill and there young Randell learned about engines.

When the reward was offered for navigating the Murray, he determined to build a river-steamer, and in September, 1852, he set a gang of carpenters to build a wooden hull. He realised that the kind of ship he could build at Mannum would not measure up to the requirements specified by the Governor. His vessel would have to be small, of wood rather than iron, and her horsepower would be slight. Yet he pushed ahead.

The engine was made in Adelaide and the boiler, a square iron tank, was made locally. When it was tested under high pressure, it was said that its sides went in and out like a concertina, and it had to be bound round with chains to strengthen it and keep it from exploding.

When the little ship was launched at Mannum, Randell called her *Mary Ann* after his mother. She was the first steamship on the Murray, and she performed very well on her trials. On March 25, 1853, Randell set out in the *Mary Ann* to sail up the Murray, but bad luck befell him. The

river had fallen due to drought, and he grounded on sand-bars so often that he decided to turn back.

It was August, 1853, five months later, before the river had risen, and then Randell set out again. This time all was going well, and the little steamer was puffing happily upstream, when, suddenly, the *Lady Augusta* appeared astern, and then majestically swept past the *Mary Ann*. On board the *Lady Augusta* was Captain Cadell and the Governor, Sir Henry, with his party.

The officials looked down with interest at the little vessel they were passing, as the bigger vessel sped on to an easy victory, reaching the Darling Junction far ahead of the *Mary Ann*. If the river had been high enough in March, Randell rather than Cadell would have had the honour of first steaming up the Murray. Yet he was not discouraged, and when he did catch up with the big steamer he showed that smallness had its advantages, for he pushed on to Moama, 1176 miles from the sea, through shallows which the *Lady Augusta* could never have passed.

Captain Cadell received the whole reward for reaching the Darling by steamer, but the people of South Australia demanded that Randell should also have a reward for his gallant effort. The Government gave him a large sum, and £450 was raised by public subscription and presented to him.

Between them, Cadell and Randell showed that the Murray could be navigated. By 1857, there were eight steamers and seven large barges operating on the Murray, as well as a great number of smaller craft. As the years passed, the river-steamers penetrated further and further into the heart of the country. Albury was reached in October, 1855, by one of Cadell's steamers. Cadell himself reached Gundagai, on the Murrumbidgee, in August, 1858. In July, 1860, he penetrated as far as Deniliquin, on the Edwards River. In 1860 also, his old rival, William Randell, reached Brewarrina on the Darling, 1600 miles from the sea, and later Randell capped his career by steaming to Walgett, 1746 miles up-river.

These were not mere exploring voyages. Each trip brought to settlers in far-out places a sense of contact with the outside

world. The steamers brought mails, medical supplies, agricultural equipment and provisions, and took away the wool and hides to market. In their own way, the puffing, clumsy paddle-steamers of the Great Rivers were playing just as important a part in the development of Australia as the tall clippers and sleek steamships that plied the ocean routes.

BOOKS AND RECORDS

The first and only of the early Governors of New South Wales have many references to early shipbuilding and to shipping generally. These are found in *The Historical Records of New South Wales* and in *The Historical Records of Australia*.

Interesting articles on early shipbuilding methods have been written by Captain J. H. Watson in the *Journal of the Royal Australian Historical Society*.

The problems facing early Australian shipowners and crews are well described in the article by Allan Rex on *Early Australian Shipping* in the same *Journal*, and G. Greenwood has also written on the early wharves and wharfs for the *Journal*.

The early settlements are fully described in *The Early Settlements of New South Wales* by A. E. Fisher and in *Maritime Settlements of New South Wales* by Dorman Gregory.

BOOKS AND RECORDS

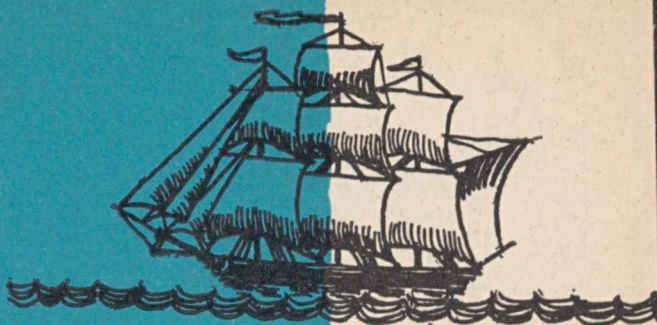
The letters and orders of the early Governors of New South Wales have many references to early shipbuilding and to shipping generally. These are printed in *The Historical Records of New South Wales* and in *The Historical Records of Australia*.

Interesting articles on early shipbuilding methods have been written by Captain J. H. Watson in the *Journal of the Royal Australian Historical Society*.

The problems facing early Australian shipowners and merchants are well described in the article by Allan Bax on 'Early Australian Shipping' in the same *Journal*, and G. Greenwood has also written on the early whalers and sealers for the *Journal*.

The early steamships are fully described in *The Early Australian Steamships*, by A. B. Portus, and in *Australian Steamships*, by Dickson Gregory.





**THE
ABORIGINAL AUSTRALIANS**

THE SYDNEY GAZETTE

ENTER THE SQUATTER

FENCING AUSTRALIA

**AUSTRALIA'S FIRST
ARCHITECT—**

FRANCIS GREENWAY

ENTER THE MERCHANT

**TALL SHIPS AND
STEAMBOATS**

EXPLORING THE AIR



LONGMANS

375
19