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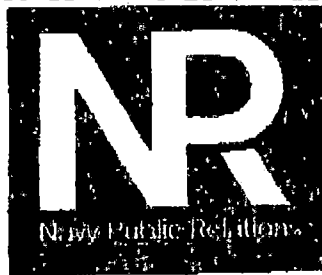
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lation of the New Norcia locality was 633. See map WESTERN AUSTRALIA, fig. 2.

In 1908 the monks also undertook the care of the distant Drysdale River Mission, where there are now two centres, with orphanage and school managed by priests, brothers and nuns. The native population of this mission is about 240.

At Bindoon, 28 miles south of New Norcia, is a fine trade and farm school for training white boys, known as Bindoon Boys' Town. It is conducted by the Christian Brothers, and in 1954 185 persons lived there.

BIBLIOGRAPHY: R. Salvado, *Memoires historiques sur l'Australie* (1854); H. N. Birt, *Benedictine Pioneers in Australia* (1911); J. T. McMahon, *Bishop Salvado* (1943); *Centenary of the Catholic Church in West Australia* (1946); J. Flood, *New Norcia* (1908); Monachus (pseud.), *New Norcia 1846-1946, historical guide to all its institutions* (1946).

NEW NORFOLK, a southern Tasmanian town situated 25 miles by rail and 21 miles by road from Hobart on one of the most beautiful stretches of the Derwent River. It is the headquarters of a municipality of the same name. Hops, apples and some small fruits are cultivated in the district, and at Boyer, 2 miles from the town, newsprint mills have been established. On the River Plenty, 6 miles from New Norfolk, is an important trout hatchery; it is called Salmon Ponds, although, in fact, true salmon are not now hatched there.

The name New Norfolk was applied to the district when settlers from Norfolk Island were placed there in 1807-8. Governor Macquarie, during his visit to Tasmania in 1811, selected the site for a town, which he called Elizabeth Town after his wife. This name was still in use in the 1820s but was eventually replaced by the district name of New Norfolk. The town was one of the sites proposed when, in 1825-6, there was a movement (which finally came to nothing) to establish the capital of Tasmania elsewhere than at Hobart. It contains the oldest continuing licensed hotel in Australia—the Bush Hotel, which received its licence in 1825—and also one of the oldest Australian churches still in use—St Matthew's Church of England, opened in 1825. It has been claimed that Vincent Wallace composed the song "Scenes that are Brightest" for his light opera *Maritana* at the Bush Hotel, but there is no definite evidence that he did so. Pop. (census 1947) 2934; (census 1954) 4756. See map TASMANIA, fig. 2.

NEW SOUTH WALES. The State of New South Wales, which occupies most of the south-eastern segment of the Australian continent, was the first colony established by Britain in Australia and was developed primarily as a pastoral and agricultural area; more recently there has also been a considerable growth of light and heavy industry. Sydney, the capital, has a greater volume of shipping than any other Australian port and is the fourth largest city in the British Commonwealth.

The first part of this article is a summary of the physical features, social and economic structure, and administration of New South Wales; the second main section contains a survey of its history from 1788 onwards. A great many aspects of the subject are dealt with more fully in other articles, such as those on the main towns and geographical features, industries, public utilities, climate, health services, and so on. In addition, many historical events and persons have entries under their own names.

Area and Population. In the early days New South Wales comprised considerably more than half of the continent, but was reduced successively by the establishment of the other colonies. Since the Australian Capital Territory and an area at Jervis Bay were ceded to the Commonwealth in 1911 and 1915 respectively the area of New South Wales has been stabilized at 309,433 square miles, including Lord Howe Island (5 square miles). New South Wales thus occupies rather more than one-tenth of the Australian continent and is the fourth largest State, exceeded by Western Australia, Queensland and South Australia.

Its boundaries are as follows: on the east, the coast from Point Danger in the north to Cape Howe in the south; on the south, a line from Cape Howe to the source of the Murray River and thence the southern bank of the river as far as the 141st meridian of east longitude; on the west, the 141st meridian; on the north, the 29th parallel of south latitude as far east as the Barwon River, thence the line of the Barwon, Macintyre, and Dumaresq rivers to the junction with Tenterfield Creek, then the crest of a spur of the Dividing Range, a part of the watershed of the range itself, and finally the line of the McPherson Range eastward to the sea at Point Danger.

The various changes that have been made in the area of New South Wales in the past and the way in which its present boundaries were established are explained in the article entitled STATES, ORIGIN AND BOUNDARIES OF.

The population of New South Wales exceeds that of any of the other States; at the census of 30th June 1954 the number of persons counted was 3,423,529 (excluding 1402 full-blood aborigines), which represented 38 per cent of the total population of the Commonwealth and an increase of 14.7 per cent over the 1947 census figure (2,984,838). Rather more than 54 per cent of these persons were resident within the 670 square miles of Greater Sydney, 28 per cent lived in other urban areas (with populations of more than 1000), and 17 per cent were in rural districts.

The total work-force in the population was approximately 1,406,600 persons, distributed among the principal employment groups in the following ratio: manufacturing and construction, 39.32 per cent; commerce and trade, 15.75 per cent; public

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service (not included elsewhere), 12.04 per cent; and primary production, 11.25 per cent.

At the time of the 1954 census the following cities and towns had populations of more than 10,000:

Sydney and suburbs	1,863,161	Penrith	17,924
Newcastle and suburbs	178,156	Lismore	17,372
Greater Wollongong	90,852	Albury	16,728
Broken Hill	31,351	Bathurst	16,089
City of Blue Mountains	23,089	Lithgow	15,128
Maitland	21,331	Cessnock	14,417
Wagga Wagga	19,235	Grafton	14,201
Goulburn	19,183	Tamworth	13,641
Orange	18,247	Dubbo	12,009

Physical and Climatic Features. Both geographically and economically New South Wales falls into four natural subdivisions which all extend roughly north and south for the length of the State; these are the coastal lowlands, the tablelands formed by the Great Dividing Range, the western slopes of the range, and the western plains, which comprise two-thirds of the State.

The seaboard of New South Wales, including major indentations, is 907 miles long (about 700 miles excluding indentations) and is comparatively regular and unbroken, with few inlets of any size. There are many fine surfing beaches and coastal lakes. The only major ports are Port Jackson (Sydney), Port Hunter (Newcastle), and Port Kembla; Port Stephens and Iluka are considered capable of development. The coastal lowlands vary in width from an average of 50 miles in the north to an average of 20 miles in the south. They are undulating and well-watered, with rich alluvial flood-plains along the lower courses of the rivers.

The tablelands division is composed of an almost unbroken series of plateaux, varying in width from 30 to 100 miles and forming the main watershed in which rise both the coastal rivers and those which flow inland. The New England Range in the north rises to heights of more than 4000 feet, but the average elevation of the northern tablelands is about 2500 feet; the southern tableland has a rather lower average height, but reaches a considerable elevation in the Snowy Mountains region, which contains the highest peak in Australia, Mount Kosciusko (7316 feet).

Westward of the tablelands the Dividing Range slopes gradually to the great western plains. The slopes generally have an adequate rainfall, but on the plains the rainfall is scanty, particularly in the far west. However, this lack is partly overcome by irrigation from the Murray and Darling river systems. There is also some use of artesian and sub-artesian water.

The principal inland rivers of the State are the Murray, 1203 miles of which lie within New South Wales; the Darling (1626 miles in New South Wales); the Murrumbidgee (980 miles); the Lachlan (920 miles); the Macquarie (590 miles), and the Namoi (525 miles). The main coastal river-systems are the Hawkesbury (290 miles), the

Hunter (290 miles), the Macleay (250 miles), the Clarence (245 miles), the Shoalhaven (205 miles), the Richmond (160 miles), and the Manning (140 miles).

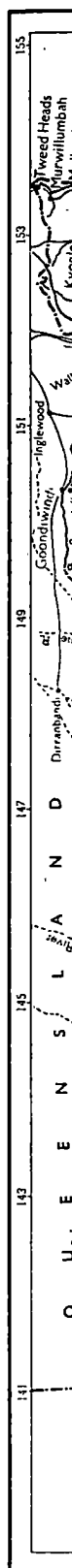
New South Wales is situated entirely within the temperate zone and the climate is generally equable and free from extremes of heat and cold. The greatest heat is generally experienced in the north-west; a shade temperature of 125°F. has been recorded at Bourke. The coldest part of the State is the southern tableland in the vicinity of the Kosciusko plateau, where in winter frost and snow are experienced for considerable periods. Rainfall varies from an annual average of about 80 inches in the north-eastern corner to less than 7 inches in the north-west, while the southern coastal region receives an average of about 30 inches a year.

Climatic factors affecting the various parts of Australia are discussed under CLIMATE AND METEOROLOGY.

Natural Resources and Land-use. Originally New South Wales was fairly well-endowed with minerals, timber, pastures, and other natural resources, but in general these have been exploited more intensively than those of any other State, with the possible exception of Victoria. Much research work has been done on the improvement of pastures and on the production of new fodder-crops, but as regards other natural resources New South Wales is not in a particularly strong position. However, a considerable amount has been done in the way of conservation. (See FORESTRY RESEARCH; SOIL EROSION AND CONSERVATION; WATER CONSERVATION AND IRRIGATION.)

As far as is known the State's minerals, with the exception of coal and lead-zinc ores, are no longer of major economic importance. Gold, which played a notable part in the opening-up of the interior, is practically worked out; the formerly valuable copper deposits at Cobar, in the central plains, were abandoned in the early 1950s on account of the high cost of working them. There are scattered deposits of tin, mainly in the south-west, but most of these are practically exhausted. Limestone, which occurs in many parts of the central and southern highlands, is still worked for cement, and on the northern beaches mineral sands are treated, principally for rutile and zircon, most of which is exported.

Black coal of high quality occurs in a huge basin under the central coast and Blue Mountains area and is mined extensively in the Hunter River valley and on the Illawarra coast to the south of Sydney. Production of black coal in 1953-4 amounted to 15,083,000 tons out of an Australian total of 19,761,000 tons. In the extreme west of the State a modern city, Broken Hill, has been built up in arid country adjacent to the extensive lead-zinc deposits of the Barrier Range. These



last-named, together with the rutile-zircon sands of the North Coast, are the only mineral deposits in New South Wales that are of world importance. (See BEACH-SAND MINERALS; COAL; and other articles on individual minerals.)

Timber, particularly cedar, was formerly exploited widely, principally in the coastal plain south of Sydney and north of the Hunter River, but these resources have been much depleted and latterly the State's most important source of timber has been the eucalypts and tropical softwoods of the tablelands and the northern coastal plain. In addition, the cypress pine of the western slopes and plains is coming into use as a timber for building. In 1953-4 there were 1108 timber mills in New South Wales, which was still the most important timber-producing State. (See FORESTRY.)

The principal wealth of New South Wales has always lain in its agricultural and pastoral industries. The use to which land has been put has been dictated largely by climatic and geographical considerations, so that it is convenient to consider the natural subdivisions of the State in turn. The coastal region is mostly used for mixed farming and particularly for dairying. In the warmer northern section sugar and bananas are grown, principally in the Tweed, Richmond, and Clarence river areas. Beef cattle are extensively grazed in the ranges. The north coast is the major dairying area of the State; large quantities of butter and milk products are processed at co-operative factories in various centres.

The central coastal area contains the coal-mining and industrial districts already mentioned. In addition, most of the raw milk for Sydney, Newcastle, and Wollongong is produced there and beef cattle are raised in the Hunter valley. Orchardring and market gardening are carried on near Maitland and Gosford, and in other places. The south coast is noted mainly for dairying (particularly cheese-making) and maize-growing. Some timber-milling is still carried on there.

The tablelands, being mainly granitic, are primarily a grazing area (for wool sheep), but some general agriculture is carried on in districts where rich volcanic loams exist. The western slopes are a major area for the raising of sheep for fine wool, for beef cattle, and for the growing of wheat. In the north some fat lambs, pigs, and fodder crops are produced, particularly in the Namoi valley and around Inverell. On the central slopes considerable orcharding is carried on, the main crops being cherries, apples, and pears. Around Bathurst and Cowra there is a profitable vegetable-canning industry. The south-western slopes, in addition to sheep, cattle, and wheat, also produce fodder crops, notably at Gundagai and Wagga Wagga.

The eastern part of the western plains is the main wool and wheat area of the State. Many properties combine the production of both com-

modities. In the Riverina district of the central plains there is a large area irrigated from the Murrumbidgee River; this has made possible the development of smaller farms, producing orchard crops, grapes, rice, fat lambs, and hay.

The western plains west of a line running through Mungindi, Nyngan, Hillston, Hay, and Barham (on the Murray River west of Echuca) are a semi-arid area where the raising of sheep for wool is the only significant industry, apart from the lead-zinc mining at Broken Hill. Along the Murray River some orchards and vineyards are maintained.

In 1954 livestock numbers in New South Wales were as follows: sheep, 59,639,000 (Australian total, 126,944,000); beef cattle, 2,316,000 (Aust. total, 10,759,000); dairy cattle, 1,238,000 (Aust. total, 4,842,000); pigs, 372,000 (Aust. total, 1,197,000). In the 1953-4 season production of wool was 544,934,000 lb. out of an Australian total of 1,245,462,000 lb. and production of wheat was 63,681,000 bushels out of an Australian total of 197,960,000 bushels. The area under wheat in New South Wales was 3,548,000 acres.

The rural industries of New South Wales are described more comprehensively in such articles as AGRICULTURE; CATTLE INDUSTRY; DAIRY INDUSTRY; FORESTRY; FRUIT INDUSTRY; and SHEEP. The entries under the names of individual fruits and crops may also be consulted.

Secondary Industry. Except for the production of some consumer goods for local use, practically no secondary industries of any importance were established in New South Wales until after Federation (1901). However, the adoption of a protective tariff by the first Federal Government gave an impetus to local manufactures, and the establishment of a major steelworks at Newcastle by the Broken Hill Proprietary Co. Ltd in 1915 made New South Wales the centre of Australian heavy industry.

This brought many other activities in its train, such as the manufacture of steel-wire, sheeting, and pipes, shipbuilding, and other heavy engineering. At the same time Port Kembla was developing as a centre of non-ferrous metal manufacture; in 1928 Australian Iron & Steel Ltd transferred their activities from Lithgow to Port Kembla and later became a subsidiary of Broken Hill Proprietary. Between them, Newcastle and Port Kembla produce practically the whole Australian output of steel. Further details about the establishment of heavy industry in New South Wales may be found under IRON AND STEEL INDUSTRY.

World War II brought about an extraordinarily rapid expansion of Australian manufactures. Not only did the larger centres greatly increase their activity, but many factories were also opened in country towns. This was initially the result of the Commonwealth Government's drive to produce

munitions and other war supplies, but after the war, owing to the shortage of labour in the main industrial centres, the tendency to decentralize secondary industry was continued. A number of British and American enterprises followed this trend; for example, Courtaulds Ltd established a large rayon factory at Tomago, near Newcastle, and California Productions opened a clothing factory at Bathurst.

However, in the middle 1950s the Sydney-Newcastle-Wollongong area was still the greatest manufacturing district in the Commonwealth. The principal factors preventing any major expansion of industry in other parts of the State are the difficulty of obtaining a power-supply on a sufficient scale and lack of an assured and plentiful water-supply. Nevertheless, much is being done to overcome these difficulties by a long-term policy of hydro-electric development. The most important of these undertakings is the Snowy Mountains Hydro-Electric Scheme (*q.v.*) which, when completed, will provide cheap and plentiful power and a controlled water-supply to a large area in the south of the State.

Additional information regarding secondary industry in New South Wales may be found in an article under that title and in entries relating to individual industries. The subject of power and water-supply is dealt with under DAMS AND RESERVOIRS; ELECTRIC POWER; HYDRO-ELECTRIC DEVELOPMENT; and WATER CONSERVATION AND IRRIGATION.

Oversea Trade. In the total oversea trade of Australia in 1953-4 the share of New South Wales was 36.0 per cent; exports were 31.7 per cent and imports 41.2 per cent of the Australian totals. The chief exports were: wool, 396,748,490 lb. (value £149,168,800); gold, 861,110 fine oz. (£13,731,000); flour, 5,221,740 centals (£10,185,700); meat and meat products valued at £9,797,100; wheat, 211,710 tons (£6,513,200); lead ores, concentrates and pig, etc., 320,720 cwt. (£920,300); butter, 2,031,230 lb. (£409,543). The total value of exports was £263,175,000.

The value of imports was £280,537,100, of which machinery, metals and metal manufactures accounted for £89,638,600; yarns, textiles and clothing for £49,186,700; oils, fats and waxes (chiefly petroleum oils) for £29,027,100; pulp, paper and board for £15,694,000; and drugs, fertilizers and chemicals for £10,532,900.

Administration and Public Services. In New South Wales, as in the other States, the Governor is the local representative of the Crown and through him are exercised the powers of the Crown in all matters of local concern. The Governor is also the titular head of the Government of New South Wales. In the exercise of his powers the Governor is guided by the advice of the Executive Council which, in practice, is formed of mem-

bers of the Ministry. The Ministry is answerable to Parliament for its administration and continues in office only so long as it commands the confidence of the Legislative Assembly; the normal term of a ministry is three years. A list of governors of New South Wales is given under GOVERNORS AND ADMINISTRATORS and a list of Premiers is appended to this article.

The State Legislature consists of two Houses of Parliament. The Legislative Assembly is the Lower House and consists of 94 members elected by general suffrage for a term of three years. The Upper House is known as the Legislative Council and consists of 60 members, each elected for a term of 12 years; the elective body for the Upper House consists of the members of both Houses, voting simultaneously on a system of proportional representation. The 60 members are not all elected at one time, but in groups of 15 every third year. Casual vacancies, caused by death, resignation, and so on, are filled by a straight-out majority vote of both Houses.

In addition to the normal ministerial departments, there are in New South Wales a number of State Parliamentary Committees, which are appointed for the duration of each parliament to supervise the administration of certain aspects of government, such as supply, public works, and public accounts. Various public services are administered by permanent statutory commissions, boards, and trusts, such as the Aborigines Welfare Board, the Board of Fire Commissioners, the commissioners for Main Roads, Railways, and Police, the Conservation and Electricity authorities, the Forestry, Hospitals, and Housing commissions, the Joint Coal Board, the Maritime Services, Metropolitan Meat Industry, Milk, and Public Service boards, the State Mines Control Authority, and the Superintendent of Motor Transport.

The electoral system is administered by the Electoral Commissioner. Voting is carried out by electoral districts and is compulsory for all adult British subjects who have resided in the Commonwealth for six months or more. In New South Wales, as elsewhere, the party system has become a dominating influence on parliamentary government. There are three main political parties, Country, Labour, and Liberal (formerly United Australia). Since 1920 the Liberal and Country parties have been in coalition and have alternated in office with the Labour party. For further details concerning the system of government and the franchise in New South Wales the articles on ELECTORAL VOTING, PARLIAMENTARY GOVERNMENT, and POLITICAL PARTIES may be consulted.

The system of local government in New South Wales is similar to that in other States; local government areas are known as cities, shires, municipalities, and country districts. In some cases an authority known as a county council has been

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instituted to co-ordinate certain activities (such as flood-control, electricity-supply, and town-planning) which are common to a number of local government units. The system is explained in some detail in the article entitled LOCAL GOVERNMENT.

In New South Wales the principal public-transport services are owned and operated by the government. All the railways, except for a few short lines maintained by industrial undertakings, are administered by the Commissioner for Railways. In 1955 there were 6102 route-miles open for traffic in the whole State. All the tramways and most of the omnibus services in Sydney and Newcastle are administered by the Commissioner for Government Transport. In other centres omnibus services are mainly run by private enterprise. Heavy road-haulage is conducted by private operators, but is restricted by legislation in certain respects, in order to control competition with the State railways. (See RAILWAYS; ROAD TRANSPORT REGULATION; TRAMWAYS.)

All facilities in ports and harbours are under government control and are administered through the Maritime Services Board. Many of the ferry services on Sydney Harbour have been owned by the Government since 1951. Main and developmental roads, and the bridges and ferries on them, are constructed and maintained by the Commissioner for Main Roads; other public roads and streets are the responsibility of local government authorities. The law relating to road transport and traffic is administered partly by the Superintendent of Motor Transport, partly by the Commissioner of Police, and to a limited extent by local authorities. Air transport is controlled by the Commonwealth Government. The Australian Transport Advisory Council, of which the State and Commonwealth Ministers of Transport are members, has the function of developing a common national policy on matters concerning transport. (See AVIATION; FERRY SERVICES; PORTS AND HARBOURS; ROADS AND ROADMAKING.)

Other communications, telephones, radio-links, and postal facilities are administered by the Commonwealth. (See POST OFFICE.) The national broadcasting stations are conducted by a commission under Commonwealth control, but there are also numbers (36 in 1954) of commercial stations in various parts of the State. (See BROADCASTING.) Three television stations, one national and two commercial, were opened in Sydney in 1956. In the financial year 1953-4 the State revenue in New South Wales amounted to £186,642,000, which sum was derived as follows: taxation, £19,104,000; railways, £74,569,000; tramways and omnibuses, £11,575,000; other business and industrial undertakings, £2,472,000; land, £3,644,000; interest, £968,000; Commonwealth payments, £59,170,000; other sources, £15,140,000.

The way in which this revenue was allocated in expenditure was: interest and charges on public debt, £19,817,000; railways, £64,182,000; tramways and omnibuses, £13,446,000; other business and industrial undertakings, £1,705,000; education, £27,805,000; hospitals, £16,294,000; other charities, £3,278,000; other expenditure, £39,987,000.

Education. In New South Wales education is free and compulsory between the years of 6 and 15. The educational system is administered by the Minister for Education through the Education Department of New South Wales. It embraces kindergartens, primary schools, secondary schools, high schools, and a correspondence school for isolated and invalid children. Alongside the public education system there are many private schools at each educational level, run by religious denominations and other authorities.

The principal public examinations are the Intermediate Certificate, which is generally an internal examination, and the Leaving Certificate, which is held externally and is the examination for matriculation to the universities. There are two general universities in New South Wales, the University of Sydney and the University of New England at Armidale, which latter serves the north of the State; in addition, there is a University of Technology in Sydney, with a branch in Newcastle. There are a number of technical colleges in the principal centres.

In 1954 there were 2557 government schools in New South Wales (including the Australian Capital Territory) with 15,478 teachers and an average enrolment of 467,441 pupils. Non-government schools numbered 768, with 4826 teachers and an average enrolment of 151,882 pupils. The University of Sydney enrolled 6983 students, the New South Wales University of Technology 4159 students, and the University of New England 239 students. The various aspects of the educational systems in Australia are described in detail in a number of articles, which are indicated under the general heading EDUCATION.

HISTORY TO 1850

The survey that follows is principally a summary of the trends and influences that have moulded the way of life and the economy of New South Wales during the various periods of its history. Many aspects of the early history of New South Wales are treated in greater detail in separate articles. The composition and personnel of the original colonizing expedition, as far as they are known, are described under FIRST FLEET; there are also entries on the Second and Third fleets. The system of transportation and the status of convicts, both before and after the expiry of their sentences in Australia, are discussed under CONVICTS AND TRANSPORTATION and EMANCIPISTS.

An account of the various expeditions which opened up the colony for eventual settlement is given in articles on **EXPLORATION**. Systems of land-tenure are referred to under **LAND SETTLEMENT**, and the gradual granting of responsible government is discussed under **PARLIAMENTARY GOVERNMENT**. The composition of the various military forces in the colony and the establishment of forts and defence posts are described under **MILITARY DEFENCE**. Developments in the economic sphere are treated under **ECONOMIC HISTORY**.

Some other principal cross-references are indicated at the appropriate points in the text, and the majority of the persons mentioned have biographical entries.

State of New South Wales

Reasons for Settlement. The story of the discovery of New South Wales by Captain James Cook in 1770 is told under **EXPLORATION BY SEA** and in the biographical entry on Cook himself. Having examined Botany Bay and sailed up the eastern coast, Cook on 22nd August 1770 took possession of the whole eastern coast in the name of King George III. At the time of his discovery he apparently did not call it by any particular name, but on the homeward voyage, while writing up his journals, he gave the name "New South Wales" to the territory he had claimed.

This was the name used in the commission given to Captain Arthur Phillip, on 2nd April 1787, appointing him "Captain-General and Governor-in-Chief in and over our territory called New South Wales", which extended from Cape York in the north to the southern extremity of the continent and inland as far as 135° east longitude, and included islands adjacent in the Pacific Ocean.

The decision to establish a British settlement in the newly-discovered territory was largely the result of the recent loss of the American colonies, to which previously considerable numbers of convicts had been transported; it therefore became urgently necessary to find some other place to which offenders could be banished. Another problem arising out of the American War of Independence was the disposal of some 50,000 American loyalists, who, after the victory of the secessionists, were deprived of their possessions and driven from the American colonies. Various proposals were made for relieving the increasing number of prisoners in the jails and hulks in Britain and for resettling the loyalists, most of whom were in what later became Canada, and in the West Indies, but advocacy of the suggestion that the settlement of New South Wales might be the answer to both problems came primarily from two men who had visited the east coast of Australia with Captain Cook in 1770, Joseph Banks and James Matra.

In 1779 Joseph (later Sir Joseph) Banks gave evidence before a committee of the House of Commons appointed to consider the convict problem; he suggested that Botany Bay, of which he

had pleasant memories, would be very suitable for the site of a convict settlement, but as the Government was still preoccupied with the American War of Independence no action was taken. In 1783 James Mario Matra (*q.v.*), who had been a midshipman on Cook's *Endeavour*, proposed to Lord Sydney, Secretary of State for the Home Department, that New South Wales would "afford asylum" for the loyalists and urged that such a settlement would be good for both trade and defence; subsequently Matra agreed that convicts also could be incorporated in such a settlement. Again, however, in spite of the support of Banks, no immediate action was taken, though undoubtedly the publicity given to Matra's suggestions played a part in the eventual decision to colonize New South Wales.

In 1785 Admiral Sir George Young submitted a detailed proposal on lines similar to those advocated by Matra and concluded that "A territory so happily situated must be superior to all others for establishing a very extensive commerce, and of consequence greatly increase our shipping and number of seamen." In 1786, therefore, Lord Sydney, with some guidance from Sir Joseph Banks, had legislation passed to authorize the dispatch of an expedition to Botany Bay. However, in this enactment the claims of the American loyalists were entirely ignored, even though many of them had shown a desire to settle in Australia, and in the King's speech to Parliament delivered in January 1787 the proposed settlement was referred to merely as an outlet "to remove the inconvenience which arose from the crowded state of the gaols in different parts of the Kingdom".

Accordingly, the First Fleet of 11 ships carrying convicts, officials, and marines sailed from Portsmouth on 13th May 1787.

First Settlement, 1788. Governor Phillip arrived at Botany Bay on 18th January 1788; he found it a poor harbour, swampy and with little fresh water, and considered that there was no site suitable for a settlement. Consequently, he proceeded to examine Port Jackson, to the north, which he found to be, in his opinion, "the finest harbour in the world". He decided to settle in a cove with a good spring of water, which he named Sydney; the fleet was brought round from Botany Bay and on 26th January (since celebrated as Australia Day) the British flag was unfurled. On 7th February the various official documents appointing the Governor and establishing courts of judicature were read to the assembled members of the expedition, and the colony of New South Wales was formally established.

The supplies and equipment sent out with the expedition were not entirely suitable for the conditions of the new colony. Tools were in short supply and in many cases of bad quality. There were no skilled labourers, either mechanical or

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agricultural. Consequently, attempts to cultivate the land were not very successful and building was slow and inefficient, so that the colonists, both official and bond, had to remain under canvas for some time.

By July 1788, however, a number of huts and a storehouse had been completed; also the first government house (a cottage on a site near the present intersection of Phillip and Bridge streets) and an observatory on Dawes Point were being built. Brickmaking was begun and the first attempt at defence, in the form of a redoubt on the eastern side of the cove, was in progress. The latter was undertaken partly from fear of the French, whose exploring expedition under La Pérouse had been encountered at Botany Bay, and partly against the aborigines, who were often troublesome on account of their petty thieving and occasional attacks on the settlers, generally in retaliation for ill-treatment or through misunderstanding.

There were disputes with the marines guarding the settlement; when requested by Phillip, they refused both to help in keeping the convicts at work and to act as unpaid members of the criminal court. Major Robert Ross, their commanding officer, insisted that they were in the colony only as a garrison and therefore had no responsibility over prisoners except those in their direct employment, or when called out on official patrol. Ross, in fact, took every opportunity to oppose the Governor and was constantly quarrelling both with the Judge-Advocate, David Collins, and with his own officers until he was sent in March 1790 as Lieutenant-Governor to Norfolk Island (*q.v.*) which had been occupied in March 1788.

There was also a good deal of trouble with the convicts, many of whom made attempts to escape. One party, led by William Bryant (*q.v.*), sailed in an open boat to Timor, where they were handed over to the British authorities and were taken to England; but such success was rare. Usually runaways were recaptured or gave themselves up; a few died of starvation, lost in the bush. However, the majority remained at the settlement; unwilling workers at any time, they were debilitated by sickness, particularly scurvy, and through insufficient food.

Food Problems. On board ship the official ration had been reasonable, amounting to two-thirds of the seaman's ration, although it was markedly deficient in certain vitamins. Once ashore, however, shortages soon became acute, so that during the whole period of his governorship Phillip's unceasing worry was to obtain enough food to keep his people alive, reinforced as they were by new arrivals, often sick and feeble.

The land yielded but little, and that very slowly. The colony depended on supplies from England, the Cape of Good Hope, or Batavia, and

these were always slow in forthcoming. Scurvy increased, and in 1790 the ration had to be cut so low that men became too feeble to work. The only fresh food was kangaroo, birds, or fish, of very variable quality and quantity. Many of the stores were lost, damaged, or stolen, and except at Rose Hill (Parramatta) cultivation proceeded only with great difficulty.

By the end of 1789 the ration had been cut by one-third; by the middle of 1790 it was 2½ lb. flour, 2 lb. rice, and 2 lb. pork per week, brought in the First Fleet and thus more than three years old. The arrival of the ships of the Second Fleet at intervals during June 1790 made matters worse. The storeship *Guardian* had been wrecked off the Cape of Good Hope and the health of the newcomers was deplorable owing to the harsh conditions enforced on the voyage, during which 247 out of 1017 convicts had died.

In 1791 the Third Fleet arrived with 1666 convicts, but their health was better than that of their predecessors, although there had been 198 deaths on the way out. By then the weekly ration had been raised to 3 lb. flour, 3 lb. rice, and 3 lb. pork or 4½ lb. beef, thanks partly to supplies from Batavia (though their quality was such that there was "no inclination to try that market again", according to Collins) and also to the improvement in local supplies from Rose Hill and Norfolk Island.

This was the turning point, although periodical food shortages were a feature of colonial existence for another 20 years. When Phillip departed from the colony in December 1792, he left a community with a weekly ration of 3 lb. flour, 5 lb. rice, 4 lb. pork (or 7 lb. beef) and 6 oz. oil, and he had already been able to report a marked improvement in health, "attributed by the medical gentlemen to the quantity of fresh meat . . . and the great quantities of vegetables" that had become available.

Phillip's Achievements. The improvement in the ration was one of the results of the cultivation that Phillip had struggled to achieve in the colony, particularly at Toongabbie, on the Liberty Plains (roughly speaking, the Homebush-Strathfield area), and at Rose Hill. He had established government farms and had given grants of land to time-expired convicts and marines. By the end of 1791 there were more than 150 persons in possession of farms, though agriculture was severely hampered by ignorance of farming technique in general (as well as of the peculiar local conditions), by lack of equipment, and by difficulties with convict labour. Phillip asked the British Government to send out some prosperous farmers to settle (though such people would naturally be unwilling to emigrate to the Australian wilderness), with no result, and the reply to his request for permission to grant land to his officers, men of some education and

resources, had not been received in the colony when he departed. It was granted not long after, however, and in due course the farms of these officials, worked by assigned convict servants, provided the bulk of local food supplies, though giving rise to some social difficulties and accusations of exploitation.

By 1792 Phillip's health was deteriorating, and he returned home to England. At the time of his departure the colony contained about 4000 people, including the settlement on Norfolk Island. His achievement was a notable one. He had, with the most unpromising materials, firmly laid the foundations of the colony, had pushed ahead with exploration around Sydney as far as the Hawkesbury and Nepean rivers, and had established friendly relations with the natives.

Subsequent Governors, 1792-1809. During the next 18 years, a succession of military and naval governors and lieutenant-governors struggled with only limited success to solve the problems of the colony; these were Major Francis Grose (1792-4), Captain William Paterson (1794-5), Captain John Hunter, R.N. (1795-1800), Captain Philip Gidley King, R.N. (1800-6), Captain William Bligh, R.N. (1806-8), Lieutenant-Colonel George Johnston (1808), Lieutenant-Colonel Joseph Foveaux (1808-9), and Colonel William Paterson (1809).

Exploration was pushed ahead, but, though the Hawkesbury and Hunter rivers and Bass Strait were discovered and Van Diemen's Land (Tasmania) was circumnavigated and settled (1803), the mountain barrier to the west of Sydney was not crossed. The convicts were safeguarded and on the whole disciplined successfully, notwithstanding an attempt in 1804 by some of the Irish prisoners to start a revolt, which became known as the Castle Hill Rising (*q.v.*); this rebellion was quickly suppressed and severely punished. However, no real effort was made to assimilate those convicts whose sentences had expired, except by giving them small grants of land, which they had neither the knowledge nor the equipment to work properly.

This ignorance and lack of resources provide the basic explanation for the shortcomings of agriculture generally, despite the attempts of each of the governors to promote it. The most successful farmers were the government officials, both civil and military, men of some education (even if not expert farmers) and possessed of capital, but their interest in farming often conflicted with their official duties, which led inevitably to disputes with the governors. In the same way much trouble was caused by the trading activities of the officers, in themselves natural enough since (in the absence of free settlers) they were the only class in the community capable of fulfilling the essential function of merchants. The result was that, as Hunter

complained, "the public duty of their respective offices are entirely neglected, to the no small injury of His Majesty's service".

The conflict between the governors and their officials was further embittered by the question of the rum traffic (*q.v.*). To the traders this was merely another profitable article of commerce, and a very useful (and potent) form of incentive payment to labour; in the view of the governors the habit of excessive spirit-drinking was damaging to the settlement, and illicit distilling was an encouragement to further idleness, vice, and crime. Hunter, King, and Bligh in turn struggled to limit the trade in spirits, but each was beaten by the combined opposition of producers and consumers.

Of more credit to the officers was their interest in sheep-raising, but, except in the case of John Macarthur, this interest was centred more on the possibilities of mutton than of wool. In 1805, however, on instructions from England, King granted Macarthur 5000 acres on the Cowpastures (*q.v.*), in the present district of Camden, where he could continue his experiments in sheep-breeding for fine wool which were in due course to revolutionize the character of the colony.

RUM REBELLION. It is commonly believed that the officer-traders of the New South Wales Corps (which had been raised in 1789 for service in the colony to replace the marines who had accompanied the First Fleet) were a peculiarly disreputable body, but this belief appears to have originated chiefly in the abuse of the corps by its opponents, which was subsequently echoed by politicians and historians to an unwarranted degree. The regiment was recruited in the ordinary manner of the time, and its officers, who had obtained their position by the usual contemporary combination of purchase and patronage, were of the same type as were to be found elsewhere in the British army.

The factors concerning the corps that were unusual were, firstly, the length of its service in New South Wales, since it was not relieved for nearly 20 years; secondly, its distance from England, so that orders were much delayed in reaching it; and, finally, the lack of any serious military duties for its personnel. As a result, the members of the corps had ample opportunity to indulge in political and commercial activities and this led to a constant conflict with the governors, which came to a head in 1808 in what became known as the Rum Rebellion.

The immediate occasion of the rebellion was Governor Bligh's arrest of John Macarthur in January (1808) for a breach of the port regulations; but the underlying cause was the long-standing grievance of the officers concerning Bligh's attempts to put down the rum traffic, and his disposition to interfere with the ordinary

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trading of Sydney merchants and officials in the interests of the small farmers on the Hawkesbury and Nepean rivers. After the so-called arrest of the Governor and his forcible deposition by officers of the corps, which was all quite illegal, the colony was once more administered by the officer commanding the New South Wales Corps, the duty being fulfilled in turn by Johnston, Foveaux, and Paterson; it was not until the end of 1809 that a new Governor, Lieutenant-Colonel Lachlan Macquarie, arrived from England, accompanied by his own regiment as a relief for the New South Wales Corps.

Macquarie's Term, 1810-21. Macquarie entered on his long and arduous governorship on 1st January 1810. He could not reinstate Bligh, who had gone to Van Diemen's Land, and it was equally impossible to arrest Macarthur or Johnston, who had gone to England in March. Macquarie, therefore, published his instructions to show that the British Government supported Bligh, arranged that the Corps should leave for England, reinstated the officials whom Macarthur and Johnston had suspended, and cancelled all grants of land or stock that had been issued.

Having done this, he proceeded to soothe public feeling by such acts of leniency as were possible. Grants issued in the ordinary course, not as rewards for rebellion, were renewed, and the dismissed officials were protected against malicious and vexatious legal actions. When Bligh came back to Sydney on 17th January he was helped to obtain evidence against Johnston in all legitimate ways, but his attempts to arouse public feeling were discountenanced. He sailed for England in May, and the colony settled down again.

New South Wales then entered on a stage of progress. Education was promoted; churches and public buildings were erected and asylums founded. Magistrates' returns recorded an improvement in morals and the better tone given to society generally by the Governor was materially aided by his wife, who laboured particularly to improve the condition of the women and children in the colony.

In his building programme, Macquarie was greatly assisted by an ex-convict, Francis Howard Greenway, who was made government architect, but the British Government was critical of the cost of these activities. The Governor in 1810 had contracted with three settlers for the building of a new hospital, in return for limited privileges regarding the sale of spirits, but though the hospital was successfully built and the contractors lost money, the Governor was reprimanded for indirectly encouraging the rum trade, which it was his duty to try to curtail. More successful was his initiative in granting a charter to the first bank (the Bank of New South Wales) in 1817, despite more objections from the Home Government.

Macquarie was also active in encouraging exploration, and in road-building to help the settlers in the country districts. The discovery of a way across the Blue Mountains and beyond by G. Blaxland, W. Lawson, W. C. Wentworth, and G. W. Evans in 1813 opened up the western plains of the colony, and subsequent journeys by John Oxley, Hamilton Hume and others extended the known area of New South Wales from the 2000 square miles of 1810 to more than 100,000 square miles in 1820, from Port Macquarie in the north to Jervis Bay in the south, and inland about 400 miles past Bathurst down the Lachlan and Macquarie rivers. Of this, more than 30,000 acres had been cleared and were under cultivation. Though agricultural technique was still backward and occasional periods of scarcity were to recur, the threat of famine had by this time been removed, especially since supplies were usually forthcoming from the settlers in Van Diemen's Land to make good any shortages that bad seasons might cause on the Mainland.

BIGGE INQUIRY. Meanwhile, in England Macquarie was being accused of giving too much favour to the emancipists (that is, pardoned or time-expired convicts). The basis of this charge was not so much a general policy of leniency, though this was alleged by his critics, as the favours he showed to a small number of educated ex-convicts whose talents he was anxious to use in the colony and who, he believed, had been guilty of no very heinous crime; among their number were William Redfern, Francis Greenway and Andrew Thompson. Stories sent to England by his local opponents, and there exaggerated, made the Government believe that Macquarie's actions were destroying the efficacy of transportation as a deterrent punishment; the British authorities were also worried by what they thought to be an extravagant administration.

In January 1819, therefore, J. T. Bigge was appointed a commissioner to inquire into the state of the colony of New South Wales. He spent more than a year in the colony and presented three reports to the British Parliament in 1822-3. He did not approve of Macquarie's emancipist policy and thought him extravagant in public works, but bore witness to the excellence of much of his administration. At the end of 1821, however, Macquarie had resigned and left New South Wales. He summed up his achievements in a final report to the British Government, of which the following is an extract:

I found the Colony barely emerging from infantile imbecility and suffering from various privations and disabilities . . . I left it . . . reaping incalculable advantages from my extensive and important discoveries in all directions . . . and, in all respects, enjoying a state of private comfort and public prosperity, which I trust will at least equal the expectation of His Majesty's Government.

Colonial Progress, 1822-50. Macquarie was succeeded by Sir Thomas Brisbane, who was also a soldier. The Bigge Report was known to foreshadow the introduction of reforms, and in 1823 the machinery of government was remodelled by the New South Wales Judicature Act. A nominated Legislative Council was established and, although the Governor was given power to override this body in emergencies and at all times retained the sole right to initiate legislation, the chief justice of the colony had always to certify that all proposed measures were not contrary to English law. A supreme court had already been established (in 1814), but it was not entirely independent of the Governor. In 1823 the court was given full independence, thus providing a further check to gubernatorial autocracy, and courts of quarter sessions, more or less on the English model, replaced the military jurisdiction of the judge advocate. Trial by jury was refused in criminal cases, but was permitted in civil proceedings if both parties consented.

In 1825 Van Diemen's Land was separated from New South Wales. In that year the population of New South Wales was 33,675, there were 237,600 sheep and 134,500 cattle, 45,500 acres of land were under cultivation, and 411,600 lb. of wool were exported. By this time the character of the colony was changing. The immigration of free settlers was increasing and migrants with capital were given extensive land grants. As a result, agriculture improved and wool-growing was considerably increased; the formation in 1824 of the Australian Agricultural Company (*q.v.*), with a large land grant at Port Stephens, led to further substantial development.

Governor Brisbane was succeeded by Major-General Ralph Darling (1825-31), a successful but conservative staff officer. His unfortunate controversy with the Press (*see* NEWSPAPERS) has been given so large a place in history that the development of the colony during his administration is frequently overlooked. The Legislative Council was enlarged to include non-official members, and the Governor's power to override it was abolished. Darling was an able administrator and brought about the reorganization of departments necessitated by the increasing population and the extension of free institutions. He created a land board to deal with applications for grants, established a department of customs and a regular postal service, and reformed the currency (*q.v.*) by placing it on a sterling basis.

Despite an economic set-back in 1827-8, due to drought and over-speculation, the immigration of small capitalists increased from 485 in 1825 to 2016 in 1829; the demand for labour exceeded the convict supply, and private experiments were made in the introduction of labourers under contract. Country settlements continued to grow, and

in 1830 the rich hinterland of Port Macquarie was opened to free settlement, the convicts being removed to a new penal establishment at Moreton Bay (Brisbane). More important for the pastoral industry (then the chief source of wealth) was the opening up of the interior by explorers, notably Allan Cunningham, who discovered the Darling Downs, and Charles Sturt, who in the summer of 1829-30 discovered the lower Murray and so settled the perplexing question of where the rivers of western New South Wales flowed.

Sir Richard Bourke (1831-7), Darling's successor, was a more cultured and liberal-minded man. He managed on the whole to keep clear of the exclusivist-emancipist dispute that was vexing the colony in the period; between those who supported and those who opposed the admittance of emancipated convicts to all walks of life, and the granting to them of full civil rights, including that of sitting on juries.

Before Bourke took office a fundamental change had been made in the system of acquiring land from the Crown; grants were abolished and sale by auction substituted, with an upset price of 5s. per acre. During his administration colonial investment was so popular that sales of land increased at an extraordinary speed, from 2086 acres in 1832 to 29,025 in 1833; 91,399 in 1834; 271,947 in 1835; 389,546 in 1836; and 370,376 in 1837.

In addition to the land thus alienated, large stretches of the western plains were occupied by squatters (*q.v.*), that is, pastoralists who settled on new land without permission. Bourke was sensible enough to realize that squatting could not be prevented while the pastoral industry proved so lucrative, and so he decided to regularize occupation by the issue of pastoral leases. The number of sheep increased from about 600,000 in 1829 to 2,750,000 in 1838, and the export of wool from 973,300 lb. in 1830 to 4,607,000 lb. in 1837. There was also an increase in cattle until the end of the 1830s, when the market was fully supplied and, export being impossible, the price fell.

This pastoral development was partly at the expense of agriculture, the cultivated area in New South Wales in 1838 being only 93,000 acres as against 108,000 acres in Tasmania, where the yield per acre was twice that of the mainland, so that considerable supplies of food could be sent to the mother colony.

Pastoral development created a great demand for labour. When the new land-system was introduced it was decided to set apart some of the land-fund to assist the migration of labourers to the colonies, but neither an increased supply of convicts nor assisted migration was able to satisfy the demands of employers, even after Bourke authorized the payment of a bounty on every migrant introduced into New South Wales by private persons. The pastoral industry continued

to expand irresistibly, as a result of the extension of exploration by Sir Thomas Mitchell and others, and by the settlement of the Darling Downs, New England, and the Port Phillip district.

AGITATION FOR SELF-GOVERNMENT. Meanwhile there was a growing demand for greater political freedom. During Bourke's term of office the Press was freed, juries were introduced for criminal cases, and the proceedings of the Legislative Council were opened to the public. But the colonists resented having to pay for the upkeep of the police and the jails, alleging that much of this expenditure was due to the British policy of transportation; they demanded greater control over their own affairs, and there were acrimonious disputes about the question of religious education and of state aid to the churches. Some also wanted transportation to be stopped, though when this was done in 1840 it was the result of English, rather than colonial, pressure.

By 1840 the old exclusivist *v.* emancipist party-grouping had virtually given way to that of the squatter-conservative party *v.* the middle and lower classes of the towns; but colonial opinion was united in demanding representative institutions of some kind. These were granted in part by an Imperial Act of 1842, which provided for a new Legislative Council, one-third of which was to be nominated and two-thirds to be elected on a franchise limited by a property qualification.

The new body, therefore, was dominated by the squatters, who resented the remaining restraints on their own power and demanded full self-government. They had been hard hit by the economic depression of 1842 and bitterly resented the Imperial land policy, which after 1842 forced them to pay £1 per acre to buy land or left them with the insecure tenure of a squatting licence. Governor Sir George Gipps (1838-46) made proposals for security of tenure, but these were strongly attacked, and the old battle-cry was raised, "No taxation without representation".

In 1846 the British Government, though retaining control of land policy, granted most of the squatters' demands in the Waste Lands Occupation Act, and in Orders in Council issued during the following year, but the squatters, led by W. C. Wentworth, still continued to agitate vigorously for full self-government.

HISTORY, 1851-1901

The second half of the nineteenth century began with a great rush of immigrants to the newly-discovered goldfields (the details of which are given under GOLD) and for a time it seemed that the whole economy of the colony would be overturned. However, the main tide was soon diverted to the richer finds in Victoria, and New South Wales ultimately benefited from the rapid increase in population.

The period up to Federation was mainly one of consolidation. Most of the adventuring had already been done, and what remained was to establish an equitable system of land-ownership and to extend communications to serve the various districts as they became settled. Constitutional developments in this period are discussed more fully under PARLIAMENTARY GOVERNMENT. The question of land-tenures is treated under LAND SETTLEMENT. For additional information about transport and communications reference may be made to articles on COACHES AND COACHING DAYS; POST OFFICE; and RAILWAYS.

Meanwhile there was a corresponding increase in urban population, with the inevitable development of a labour movement, of which details may be found under POLITICAL PARTIES and TRADE UNIONISM. The increase in population brought a need for the development of local industries; this aspect of the period is dealt with under SECONDARY INDUSTRY and ECONOMIC HISTORY, as well as in articles on individual industries. Other references are indicated in the text of the following section.

Political Developments. The constitution was made more liberal by an Act of 1850, which also separated the Port Phillip District (Victoria) from New South Wales; British control of land policy was surrendered in 1852, and responsible government was finally granted in 1855 by the establishment of an elected lower house, the Legislative Assembly.

These were largely victories for the squatters; but in 1849 when some of them showed sympathy towards the British Government's experiment of reviving convict transportation, they were forced to give way by the agitation of the working and commercial classes of the towns, led by Robert Lowe (later Lord Sherbrooke) and Henry Parkes. By 1860 the population of Sydney, which was already sadly disfigured by slums, though adorned by its university (1852), was almost 100,000.

Effect of Gold Discoveries. The large-scale free immigration of the 1830s and 1840s had created a substantial working-class, whose numbers were greatly increased by the rush of "diggers" who arrived after the discovery of gold in 1851, first near Bathurst and elsewhere in New South Wales and later in Victoria. Naturally, the much richer deposits of the latter colony attracted the greater number of migrants, but the population of New South Wales rose from 197,000 in 1851 to 350,000 in 1861.

The squatters now no longer dominated the political structure of the colony, but owing to the composition of the Legislative Council and because of unequal electoral districts and plural voting for the Legislative Assembly they were able to retain a more influential position than was warranted by their numbers alone; in this they were helped also by the importance of wool.

The Nauruan population is located mainly on the fertile coconut belt between the beach and the coral cliffs. For administrative purposes the island is divided into 14 districts, each in charge of a chief, with a head chief presiding over the district chiefs to form the council which advises the Administrator on native affairs. The districts correspond roughly to the pre-European organization.

The Nauruans have adopted Christianity; their conversion commenced in 1887 when a missionary arrived in response to their own appeal for aid in overcoming a wave of lawlessness that was disrupting the life of the island. Subsequently both Roman Catholic and Protestant missions were established. As a result, all except the very old are bi-lingual and teaching in the schools is mainly in English. Until 1923 education was entirely in the hands of the missions, but since then nine schools have been established by the administration and education has been made compulsory. The Nauruan language appears to bear little relationship to any other Pacific language and there is a tendency among the better-educated Nauruans to dispense with it altogether in favour of English.

Little is known of the previous religion of the people, but there are still traces of totemism and of some belief in spirits and gods. There appears also to have been some sort of matrilineal clan organization. The subject was studied by Camilla H. Wedgwood.

Nauru is not suited to agriculture and little is carried out by the islanders, apart from the cultivation of coconut and pandanus palms. Although in the past most of the Nauruans were skilled fishermen, with the availability of imported foodstuffs fishing has practically ceased.

Except for small areas owned by the administration, the British Phosphate Commissioners, and the missions, the whole island is owned by the islanders under their traditional system of land tenure. Royalties on phosphate produced from their property are paid to the Nauruans and the only tax levied is a small annual capitation tax.

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(See also SUPERPHOSPHATE INDUSTRY.)

NAUTILUS, the name given to members of two families of cephalopod (many-armed) molluscs. The pearly nautili (Nautilidae), with more than 10 arms, are the only cephalopods to have a protective external shell; it is chambered and pearl-lined. Members of the paper nautilus family (Argonautidae) are eight-armed and the shell—a delicate white structure often washed ashore—is not a true shell but a cradle secreted by the female to hold her eggs.

(See also MOLLUSCA.)

NAVAL COLLEGE. The Royal Australian Naval College was established in 1913 as a training school for officers of the newly founded Royal Australian Navy. Its establishment was largely the work of Captain B. M. Chambers, R.N., who was at that time Second Naval Member of the Australian Commonwealth Naval Board. A site was selected at Jervis Bay (*q.v.*), N.S.W., and while accommodation was being built there temporary premises were secured at Osborne House, North Geelong, Vic. Twenty-eight cadet midshipmen aged 13 or 14 years entered the college at Geelong in February 1913, and the college was formally opened by the Governor-General, Lord Denman, on 1st March of that year. One of the cadets in the first entry was J. A. Collins, who subsequently, as Vice-Admiral Sir John Collins, K.B.E., C.B., R.A.N., was First Naval Member and Chief of Staff of the Australian Commonwealth Naval Board (1947-55).

After two years at Geelong the college was moved to the prepared site at Jervis Bay. In 1930, for reasons of economy, it was transferred to Flinders Naval Depot, Westernport, Vic., where it remained. In 1956 it was announced that the Government intended to return the college to Jervis Bay in 1957. The course of training instituted, originally lasting four years, was designed to give a sound general education in a naval atmosphere, and with an increasing naval bias. During World War II, 468 officers trained at the college served in the fighting forces, 132 of whom received decorations or were mentioned in dispatches.

Conditions of entry have been modified since the college was established. In the mid-1950s there were two types of entry: normal and matriculation. Both entries were for service in the executive, engineering, electrical, or supply and secretariat branches. Applications for normal entry close annually in June, for boys 15 years of age. Selected candidates spend three years at the college and then go to the United Kingdom for further professional and technical instruction. Applications for matriculation entry also close annually in June, for youths up to 18 years of age who are qualified to matriculation standard for entrance to an Australian university or intend sitting in the year of application for an examination which will qualify for matriculation. Cadet midshipmen of matriculation entry spend two terms (about eight months) at the college, followed by two terms at sea, and then undergo further professional and technical training in the United Kingdom.

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NAVAL DEFENCE. This article deals first with the situation of the Royal Australian Navy in 1955, describing the ships and establishments

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NAVAL DEFENCE

then existing, the strength of the naval forces in terms of personnel, the way in which the navy was financed and administered, and finally the conditions of service under which personnel were engaged. A historical section follows, describing the origins and development of Australian naval defence. The article does not deal with the operations of Australian naval forces in time of war; an account of these is given in the articles CHINA NAVAL CONTINGENT; WORLD WAR I; WORLD WAR II; KOREAN WAR. Naval surveying activities are described in HYDROGRAPHIC SURVEYS.

Since its establishment in 1910, the Royal Australian Navy (R.A.N.) has been designed as a force to co-operate with other naval forces in the control of sea-communications in time of war, in its earlier period with the other naval forces of the British Commonwealth, in later years with the forces of those countries or groups of countries with which Australia has had alliances. Thus in 1955 the role of the R.A.N. in war was envisaged as comprising five responsibilities: (i) to secure local sea communications; (ii) to provide forces to assist in securing the sea communications of the ANZAM (Australian-New Zealand-American) region; (iii) to prevent an attack on Australian territories by enemy seaborne forces; (iv) to escort Australian land forces where required and subsequently to assist in their support; and (v) to contribute to the whole of the allied naval forces assembled for offensive action.

Ships and Establishments. The plans for the peace-time navy in the years after World War II provided what was regarded as the minimum effort necessary to prepare it to meet potential war-commitments, and to be able to expand readily if required to take an active part in the "cold war" in the Far East. These plans, together with commitments dictated by governmental agreements, determined the policy as to the number of ships to be kept in commission and their employment in peace.

In pursuance of this policy, the R.A.N. in 1955 comprised the following ships in commission:

Ships	Tons	Knots	Armament, etc.
Light fleet carriers			
<i>Sydney</i>	14,000	24.5	30 x 40-mm. A/A guns.
<i>Melbourne</i>	14,000	24.5	25 x 40-mm. A/A guns.
			Both ships were intended to carry Sea Venom jet fighters and Gannet turbo-prop anti-submarine aircraft, and to be equipped with mirror landing aids and steam catapults.
Fleet destroyers			
<i>Anzac</i> }	2,440	31	4 x 4.5-inch, 12 x 40-mm. A/A guns; 10 x 21-inch torpedo tubes; anti-submarine squid.
<i>Tobruk</i> }			
Anti-submarine destroyers			
<i>Arunta</i>	2,012	36.5	4 x 4.7-inch, 2 x 4-inch, 6 x 40-mm. A/A, 4 x 2-pdr guns; 4 x 21-inch torpedo tubes; anti-submarine squid.
<i>Warramunga</i>			

Ships	Tons	Knots	Armament, etc.
Anti-submarine frigates			
<i>Quadrant</i> }	2,020	36	2 x 4-inch, 2 x 40-mm. A/A guns; 2 x 21-inch torpedo tubes; anti-submarine weapons.
<i>Queenborough</i> }			
<i>Quickmatch</i> }			
Frigates			
<i>Condamine</i> }	1,537	20	4 x 4-inch, 3 x 40-mm. A/A guns; one hedgehog.
<i>Shoalhaven</i> }			
<i>Murchison</i> }	1,489	20	2 x 4-inch, 2 x 40-mm. A/A guns; two squids.
<i>Hawkesbury</i> }			
<i>Barcoo</i> }			
Frigate (sloop)			
<i>Warrego</i>	1,060	16.5	3 x 4-inch, 2 x 40-mm. A/A guns.
Ocean minesweepers			
<i>Cootamundra</i> }	790	15.5	1 x 4-inch, 1 x 40-mm. A/A guns.
<i>Fremantle</i> }			
<i>Gladstone</i> }			
<i>Junee</i> }			
<i>Wagga</i> }			
Boom defence vessels			
<i>Kangaroo</i> }	773		
<i>Karang</i> }			
<i>Koala</i> }			

Also in commission were 5 air-sea rescue vessels (18 tons); 3 tugs (224 tons), and 1 tug (594 tons); 10 general-purpose vessels (91 tons), and 1 general-purpose vessel (138 tons); 13 motor lighters; 2 diving tenders; and 3 seaward defence motor launches (46 tons).

In reserve were the cruiser *Hobart* (6900 tons; 32.5 knots; 8 x 6-inch, 4 x 4-inch A/A guns; 8 x 21-inch torpedo tubes); 2 anti-submarine destroyers (*Quality*, *Bataan*); 1 anti-submarine frigate (*Quiberon*); 6 frigates (*Barwon*, *Burdekin*, *Culgoa*, *Diamantina*, *Gascoyne*, *Macquarie*); 1 frigate (sloop), *Swan*; 23 ocean minesweepers; 3 boom defence vessels; 3 landing ships (tank); 5 general-purpose vessels; and 1 tug.

In addition to the ships, a number of shore establishments were manned. Chief among these were the main training establishment, Flinders Naval Depot, Westernport, Vic. (H.M.A.S. *Cerberus*), which not only trained ratings and petty officers, but also contained the Royal Australian Naval College where officers were trained; the naval air-station at Nowra, N.S.W. (H.M.A.S. *Albatross*), the land headquarters of the Fleet Air Arm; and the various base facilities, including the capital-ship dry dock (the Captain Cook Graving Dock, *q.v.*) at Sydney.

The administrative organization of the navy was by States, each of which had a naval headquarters commanded by a naval officer-in-charge or a resident naval officer. These State headquarters in 1955 were as follows: at Sydney, Garden Island (H.M.A.S. *Kuttabul*), Balmoral (H.M.A.S. *Penguin*), and Edgecliff (H.M.A.S. *Rushcutter*); at Melbourne, Port Melbourne (H.M.A.S. *Lonsdale*) and Williamstown (H.M.A.S. *Lonsdale II*); Brisbane (H.M.A.S. *Moreton*); Adelaide (H.M.A.S. *Torrens*); Fremantle (H.M.A.S. *Leeuwin*); Hobart (H.M.A.S. *Huon*); and Darwin (H.M.A.S. *Melville*). There was an advance base (H.M.A.S. *Tarangau*) at Manus in the Admiralty

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Islands; and two depots overseas, H.M.A.S. *Cerberus II*, in London, and H.M.A.S. *Commonwealth*, at Kure, Japan. Also in Australia were the naval wireless station, H.M.A.S. *Harman*, at Canberra, and H.M.A.S. *Watson*, the radar school at Sydney.

Strength. In December 1955 the Australian naval forces comprised the following personnel:

Permanent forces: 1232 officers; 11,620 ratings; 59 Papuan ratings in the New Guinea Division; 10 officers of the Women's Royal Australian Naval Service (W.R.A.N.S.) and 210 W.R.A.N.S. ratings; 117 cadet midshipmen.

Reserve officers: 107 Royal Australian Naval Reserve Seagoing (that is, serving merchant service officers on the reserve); 567 R.A.N.R. (civilians who voluntarily underwent peace-time training); 795 Royal Australian Naval Volunteer Reserve (retired merchant service officers, yachtsmen, and others with nautical experience and interests); 48 W.R.A.N.S.

Reserve ratings: 1260 R.A.N.R.; 4476 R.A.N.R. (National Service trainees); 1237 R.A.N.V.R.; 940 Royal Australian Fleet Reserve and 15 Royal Fleet Reserve (retired permanent service ratings); 38 naval dockyard police; 236 Royal Navy pensioners; 267 R.A.N.R. cadets.

Finance and Administration. Finance for the navy is provided in annual naval estimates in the Commonwealth budget. The estimates are presented to Parliament by the Minister for the Navy. Estimates for the year 1955-6 totalled £48,834,000. Expenditure for the year 1954-5 was £47,213,000.

The navy is administered by the Australian Commonwealth Naval Board, which is composed of uniformed and civilian members. The Minister for the Navy is chairman of the Board. There are four Service members: the First Naval Member and Chief of the Naval Staff (responsible for overall administration and operations, and senior member next to the Minister); the Second Naval Member (personnel and stores); the Third Naval Member (engineering and shipbuilding); and the Fourth Naval Member (Fleet Air Arm). The other civil member is the Secretary, Department of the Navy.

In Navy Office itself, situated in Melbourne, administration is through a number of directorates (for example, operations, plans, intelligence, medical services, engineering, reserves). Certain of the directors form the Naval Staff. Parallel with the service administration is that of the civil side, administered by the Secretary of the Department through the secretariat. Uniformed staff and civil staff are closely associated in their duties, each directorate, for example, having its civil staff—as does each State headquarters and depot.

The responsibility of the Naval Board extends through administrative channels over the Flag Officer Commanding the Australian Fleet (a rear-admiral); the Flag Officer-in-Charge Eastern Area

(a rear-admiral); and the various naval officers-in-charge and resident naval officers. These include the Commodore-Superintendent-of-Training, Flinders Naval Depot; Naval Officers-in-Charge North Eastern Area (*Tarangau*), North Western Area (*Melville*), Western Area (*Leeuwin*), South Eastern Area (*Lonsdale*), and Kure (*Commonwealth*); and the resident naval officers in Queensland, South Australia, and Tasmania.

Conditions of Service. Ranks and uniforms in the R.A.N. conform with those of the Royal Navy, with the exception that the highest rank in the R.A.N. so far attained is vice-admiral, that rank being held by the First Naval Member and Chief of the Naval Staff.

Officer entry into the navy via the Royal Australian Naval College is described in the preceding article. Candidates for entry as ratings must be willing to engage for a period of (i) 12 years from date of entry, or (ii) 6 years from date of entry (8 years in the case of trade branches). Age limits are as follows: general service branches, 17-26 years; Fleet Air Arm, 17-24 years aircrew, 18-28 years non-flying trade branches. Successful candidates go to Flinders Naval Depot for preliminary training.

Entry into the W.R.A.N.S. is limited to unmarried women or widows without dependent children between the ages of 18 and 40. (Ex-W.R.A.N.S. may be accepted up to 45.) Enlistment is for a period of four years and all recruits are trained at Flinders Naval Depot. W.R.A.N.S. are employed in shore establishments.

Men without previous experience may enter the R.A.N.R. between the ages of 18 and 35, and youths may become R.A.N.R. cadets between the ages of 16 and 18. Applicants undertake to serve for three years, and to attend at least 18 two-hour periods each half-year. These periods are held in the evening and/or during daylight on Saturdays. Opportunities are afforded reservists to embark for an annual cruise or to carry out continuous training in a naval technical school. Naval pay and certain allowances are paid during such periods of training.

HISTORY

The history of Australian naval defence comprises three epochs: the purely British period, ending with the naval agreement of 1887; the epoch of auxiliary squadrons and subsidies, ending with the conference of 1909 on Imperial defence (*see COMMONWEALTH RELATIONS*); and the establishment of an Australian squadron (later fleet) as a separate but integral part of the navy of the British Commonwealth of Nations.

Period to 1887. In the early days of the settlement of New South Wales, when the main naval concern was the possible arrival of French vessels to annex lands not yet formally taken over by

Britain, the naval defence of Port Jackson was secured by the occasional presence of a 20-gun ship of 500-600 tons and a small tender mounting six 3-pounders. The first armed vessel belonging to the colony was the *Cumberland*, a 28-ton schooner launched in 1801; but she was armed only "for pursuing deserters". For over-all defence, reliance was placed on the British navy, which, being occupied in the French wars, could spare no ships to station in Australia. Cover was, however, given by British forces in the Indian Ocean.

By the time of Governor Macquarie (1810-21) the eastern seas were free of French ships and defence seemed unnecessary; but in 1821 the British Cabinet decided—probably because of the development of trade in those waters—that a warship should be regularly stationed on the coast of New South Wales, and from this decision developed the Pacific squadron of the Imperial navy. In the early 1850s the ships of this squadron based on Sydney comprised a sailing frigate of 26 guns (the *Calliope*); an 8-gun brig (the *Herald*); a 14-gun sloop (the *Electra*); a 12-gun sloop (the *Fantome*); and two small paddle-wheel steamers (the *Acheron* and *Torch*) mounting five and nine guns respectively. Australia then formed part of the East Indies station, and this squadron was under the command of the Flag Officer Commanding, East Indies.

In 1854 the Crimean War aroused apprehensions of attack by Russian warships known to be in the Pacific, and New South Wales and Victoria took steps towards local defence. In 1855 the *Spitfire*, the first war-vessel built in the colony, was launched in Port Jackson. Of 60 tons, she mounted a long 32-pounder gun. In the meantime Victoria had sent to England Commander W. N. Lockyer (who had resided in the colony for some time) to superintend the building of an armed steamer for the defence of Port Phillip. This ship, the sloop *Victoria*, a twin-screw vessel of 580 tons, mounting two 32-pounders and one 68-pounder, arrived in Hobson's Bay in May 1856.

In 1858 Sir Henry Young, the Governor of Tasmania, wrote to the Secretary of State for the Colonies urging the necessity for making the Australian colonies an admiral's station and maintaining in Australian waters a naval squadron of commensurate strength. He sent a copy of this letter to the Governor of New South Wales (Sir William Denison), inviting that colony's support. This was given in principle, and as a result the Admiralty, in March 1859, informed the two Governors that the force would be strengthened and that their lordships "had under consideration the expediency of a complete separation of the Squadron in the Australian Seas from that under the command of the Flag Officer on the East Indian Station, but they are of opinion that an officer with the rank of Commodore will be sufficient for all general

purposes at present". That same month Captain Loring, of H.M.S. *Iris*, was instructed "to hoist a Blue Pennant and to assume command as Senior Officer of Her Majesty's Ships on the Australian Station independently of the Commander-in-Chief in India. The limits of the Command are to be as they are now defined in the Commander-in-Chief's instruction, namely—bounded on the North by the Parallel of 10 degrees of South Latitude—on the East by the Meridian of 170th degree of West Longitude—on the South by the Antarctic Circle—and on the West by the Meridian of 75th degree of East Longitude."

In June 1859 the force on the Australia station consisted of the 26-gun sailing frigate *Iris*; the 21-gun screw ship *Pelorus*; the 14-gun screw vessel *Niger*; the 12-gun sailing brig *Elk*; and the 11-gun screw ship *Cordelia*. The Admiralty proposed that this force should be increased, since "it is necessary not only to provide for the defence of the Colony, but, in the event of war, to give periodical convoys to treasure ships proceeding home either by the Cape of Good Hope or by Cape Horn".

The Colonial Naval Defence Act of 1865 provided for a definite colonial naval policy under which colonies were to be able to provide, maintain and use their own vessels of war under prescribed conditions; to raise and maintain seamen for service; and to raise and maintain volunteers for the Royal Naval Reserve. In 1866 the Victorian Treasurer, George (later Sir George) Verdon, went to England to discuss colonial defences among other matters, and obtained £100,000 towards the cost of the *Cerberus*, a turret ironclad for harbour defence; and the gift of the *Nelson*, an old "wooden wall" which, originally a 120-gun three-decker and at the time of her launching in 1814 the largest ship built in Britain, had been cut down to a 72-gun two-decker and given an auxiliary screw. In Port Phillip she became the training-ship for the local naval brigade. Cut down to a single-decker in 1881, she was sold in 1898 to private owners. The *Cerberus*, which mounted four 18-ton muzzle-loading guns, arrived in Port Phillip in 1871, and in her day was the most powerful ship in the hemisphere. In 1926, by which time she had long been obsolete, she was dismantled and sunk to form a breakwater at Black Rock, on Port Phillip Bay.

In 1869 a proposal was made by the Admiralty to establish a permanent Australian naval force, the colonies to pay half the cost and the upkeep. However, this proposal fell through, and subsequently Lord Carnarvon, Secretary for the Colonies, appointed Sir William Jervois (*q.v.*) and Colonel (afterwards Sir Peter) Scratchley (*q.v.*) to discuss with the colonial governments a policy of naval and military defence; the two men reached Australia in 1877. The Jervois report (issued in

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1879) based naval proposals on the policy of leaving offensive action to the Australian squadron of the Royal Navy, but recommended that the wealthier colonies should provide a few gunboats to protect trade, and a few torpedo boats or launches for harbour defence. Locally provided vessels should be manned by locally established naval brigades, and all floating defences should be under the control of the officer commanding the Australian squadron. Nothing came of this, nor of the proposal made in 1891 by the Premier of South Australia to revive the 1869 proposal; and each colony proceeded independently.

In New South Wales a naval brigade had already been formed, and in 1881 the Admiralty gave it the screw-corvette *Wolverene* as a training-ship. Besides the *Victoria*, *Cerberus* and *Nelson*, the naval defences of Victoria in 1885 included the *Childers*, a first-class torpedo boat, two second-class torpedo boats, and four harbour-trust dredgers armed with old guns. In 1884 Queensland commissioned the two gunboats *Gayundah* and *Paluma* and the torpedo boat *Mosquito*. In the same year South Australia obtained the small but heavily-armed cruiser *Protector*. In pre-Federation years Tasmania had only a second-class torpedo boat, laid up for years and finally transferred to South Australia. Western Australia had no naval force whatever.

At this period (coincidental with the advent of another Russian "scare") the British squadron on the Australia station was strengthened by the arrival of the armoured cruiser *Nelson*, and by the appointment in command of the station of Rear-Admiral George (later Admiral Sir George) Tryon (*q.v.*), who had been instructed to confer with the colonial Premiers on the question of naval defence, especially from the point of view that Australia should share responsibility for defence at sea as distinct from harbour and coastal defence. Tryon laid down the important principle that personal service was better than any amount of subsidy—a declaration which sowed the seed of a really Australian squadron.

The immediate results of Tryon's advocacy were seen at the Colonial Conference in London in April 1887. Arising from this conference, the Australasian Naval Defence Act, 1887, was passed by the House of Commons, giving legal effect to an agreement between the British and the colonial governments subject to parliamentary ratification. Under this agreement it was decided that the British squadron in Australian waters should be supplemented by an "auxiliary squadron" of five fast third-class cruisers and two torpedo gunboats. Beyond certain limits these vessels could be employed only by permission of the colonial governments, but within them they were to be controlled by the officer commanding the Australian squadron, which was to be maintained at its normal

strength. They were to be constructed at British expense and were to revert to Britain whenever the agreement terminated. The colonies concerned were to pay 5 per cent on their prime cost and £91,000 a year towards maintenance. Three cruisers and one gunboat were to be in permanent commission and the remainder kept in reserve in Australian ports.

The agreement, which was for 10 years, was ratified by most of the colonies in 1888 and by Queensland in 1891. Though it did not realize Tryon's ideal, the agreement was the beginning of a definite Australian enterprise, and a locally manned and controlled squadron was out of the question so long as Australia had no central government.

Period to 1909. In the last decade of the nineteenth century financial stringency led to reductions in defence expenditure. The colonies reduced their establishments and placed their ships in reserve; New South Wales declined to replace the *Wolverene*, which had been broken up in 1889. In 1899, however, the Naval Commandants of New South Wales, Queensland, South Australia and Tasmania, with the secretary of the Victorian Defence Department, drew up an important report. Basing their recommendations on the value of Tryon's "personal service", they pointed out that this was not attainable in existing circumstances as the reserve ships of the auxiliary squadron were always laid-up and not utilized for training, and that "the present policy, namely that of payment in specie in return for naval defence furnished *in toto* by the mother country, makes for no advance whatever". They recommended that the several naval brigades should be amalgamated into a single federal force, and that the Admiralty should provide ships of a type which should be effective in time of war and in which local forces could be trained in time of peace. They calculated that the expenditure on local naval forces, plus the contribution under the 1887 scheme, would maintain five second-class cruisers and a reserve sufficient to man them in time of war and to make up wastage in the Imperial squadron.

During the China War of 1900 three vessels of the auxiliary squadron were lent to the Admiralty for service there (*see CHINA NAVAL CONTINGENT*). With their return to Australia, the whole subject of naval defence was debated. Objections were raised to the use of Australian vessels and men in fighting which did not directly concern Australia; on the other hand the limitations under which the British admirals and the Admiralty controlled the auxiliary squadron had for some time concerned them both; and the Admiralty propagated the creed that naval defence could not be a matter of merely local interest but consisted of a general offensive to "seek the enemy out and destroy him"—necessitating one navy under one control.

These principles influenced the Australian delegates at the Colonial Conference of 1902. Captain W. R. (later Vice-Admiral Sir William) Creswell (*q.v.*), who did more than any other man to bring the Royal Australian Navy into being, was then Naval Commandant of Queensland. Just before the conference he had revived the contentions advanced by the commandants in 1899. His report was freely quoted and discussed at the conference. The Admiralty contributed a memorandum which set forward the principles stressing the need of a single controlling naval authority. The First Lord, making some concession to the idea of personal service, suggested that one or two cruisers of the Australian squadron should be manned exclusively by Australians under the command of Imperial officers, and that these ships should be interchanged occasionally with ships of other squadrons. He also suggested the formation of branches of the Royal Naval Reserve, and insisted that ships of the auxiliary squadron should be available for service anywhere in the eastern seas.

A scheme giving effect to these views resulted from the conference. The distinction between the ships of the Royal Navy and those paid for by Australia was abolished. The Admiralty bound itself to maintain a squadron of prescribed strength based on Australian ports but operating where required. The Commonwealth agreed to pay five-twelfths of the total cost annually up to a maximum of £200,000, New Zealand paying one-twelfth. Three drill ships and one other, officered by Royal Navy and Royal Naval Reserve officers, were to be manned as far as possible by Australians and New Zealanders. Eight navy cadetships were given annually to Australia and two to New Zealand; and it was decided to establish branches of the Royal Naval Reserve. In effect this arrangement abolished the idea of hire and letter which had given Australia a feeling of practical ownership of the auxiliary squadron, and substituted that of subsidy, against which Australia had protested in 1887; and in spite of a gain in the matter of personal service, public opinion resented what it considered a distinct loss.

The naval forces and establishments in the States were transferred to the Commonwealth in March 1901, but until February 1904 were administered under State Acts and regulations. The Commonwealth Defence Act of 1903 came into force on 1st March 1904, and in the same year an amending Act established a Naval Board of Administration, which came into existence on 12th January 1905 with Creswell as its director. The ships taken over from the States—in poor condition and lacking even nucleus crews—were:

From Victoria: *Cerberus*, twin-screw armoured turret-ship, four guns, 3480 tons; *Countess of Hopetoun* and *Childers*, first-class torpedo boats; *Lonsdale* and *Nepean*, second-class torpedo boats.

From Queensland: *Gayundah* and *Paluma*, twin-screw gunboats, each two guns, 360 tons; *Mosquito*, second-class torpedo boat; *Midge*, torpedo launch.

From South Australia: *Protector*, cruiser, six guns, 920 tons; one second-class torpedo boat.

In 1905 Creswell advanced a proposal for a local squadron of three 3000-ton "cruiser-destroyers", 16 destroyers, and 13 torpedo boats within five years, the proposal also including provision for the manufacture of munitions and ordnance in Australia, and the assumption by Australian forces of the responsibility for local defence, the squadron becoming an integral part of the Imperial navy. These proposals caused the Commonwealth Government to ask the British Committee of Imperial Defence to prepare a general scheme of Australian defence, and early in 1906 Creswell was sent to England to study naval developments. During his absence the report of the committee reached Australia, and was found to condemn in general terms his proposals, mainly those which concerned destroyers.

On Creswell's return to Australia he and his fellow commandants advanced a modified proposal for destroyers, but under Admiralty influence the Prime Minister, Alfred Deakin, rejected this. By persistent advocacy of some form of local naval force, however, he obtained concessions from the Admiralty; and he brought back from the Imperial Conference of 1907 a scheme for a flotilla of nine first-class torpedo boats and six submarines. Australian expert opinion, however, condemned this scheme largely because submarines of that period were unsuited for operations in Australian waters. Deakin thereupon put aside from surplus revenue an amount sufficient to build several torpedo boats whenever Parliament agreed. Andrew Fisher, who succeeded Deakin in 1910, adopted a scheme for 19 destroyers (practically the modified proposals of the commandants) and used Deakin's savings to build three of them at once.

Developments to World War I. In 1909 the rise of Germany as a naval power and as an aggressive commercial rival roused apprehension throughout the British Empire. Various schemes were advanced in Australia, including one that Britain should be given funds for at least one "Dreadnought" battleship. Fisher preferred to spend money on a local squadron, but suggested an Imperial Conference on defence, and offered to place all Australian warships at Admiralty disposal if war seemed imminent. At the crucial moment, however, Fisher's ministry lost office, and the new ministry (Deakin's) sent to the conference a delegate (Colonel the Hon. J. F. G. Foxton, *q.v.*) who was instructed to offer a "Dreadnought" or any other form of help that the conference might recommend. Creswell, who was then in England, also attended the conference.

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In the end the conference recommended that the whole system of Pacific defence should be remodelled. A Pacific fleet would be constituted of three units, one specially attached to the Australia station, one to the East Indies, one (which would take charge of New Zealand defence) to the China station. Each would consist of one large battle-cruiser; three light cruisers; six destroyers; and three submarines. The battle-cruisers offered by New Zealand and Australia would be flagships of the China and Australia units respectively. The East Indies and China units would be under Admiralty control, but the Australia unit would be paid for and controlled by Australia, and eventually manned entirely by Australians. This proposal was welcomed in Australia, and the Commonwealth bent its efforts towards the completion of its unit and necessary accessories. The Naval Defence Act of 1910 was passed, and in October 1911 the adoption of the title Royal Australian Navy was authorized by the King.

The navy came into existence when the destroyers *Parramatta* and *Yarra* (ordered by Fisher in 1908) reached Australia in September 1910. A third destroyer, the *Warrego*, shipped out in parts, was assembled in Sydney, and commissioned in 1912. The battle-cruiser *Australia* and the light cruisers *Melbourne* and *Sydney* arrived in 1913, and two submarines in 1914. A naval college was established temporarily at Geelong, Vic., in 1913, and moved to Jervis Bay, N.S.W., in 1915. In 1911 the reformatory ship *Sobraon*, bought from the New South Wales Government, was remodelled and commissioned under the name *Tingira* as a training ship for boys.

In 1910 the second Fisher Ministry invited Admiral Sir Reginald Henderson to report on naval bases and training schools, and to make any other suggestions he chose. His report, presented in March 1911, was an elaborate memorandum covering the development of an Australian navy during the next 20 years. He planned a fleet of 52 ships, manned by almost 15,000 officers and men, these figures to be reached at the end of four "eras", the first (1911-18) of seven years, the others of five years each. Work was begun on some of the bases he recommended, and the naval administration was reorganized as he suggested; but his "Australian navy" proposals were not adopted.

Meanwhile the "unit" scheme had been transformed out of existence. The Admiralty concentrated modern capital ships (obtaining New Zealand's consent to include the *New Zealand*) in European waters, and sent ships of a less important type as flagships to China and the East Indies. The *Australia* (which the Commonwealth insisted on retaining) was the only ship of her class in eastern waters, so that the Pacific fleet was reduced far below the intended strength. Negotiations for the staging of another naval conference

to discuss this situation were in progress when war broke out in August 1914. (See WORLD WAR I, Naval Operations.)

The Australian navy as it fought in the war consisted of the battle-cruiser *Australia*; the light cruisers *Melbourne*, *Sydney*, *Brisbane*, and *Encounter*; the small cruisers *Pioneer* and *Psyche*; the destroyers *Parramatta*, *Yarra*, *Warrego*, *Huon*, *Swan*, and *Torrens*; the submarines *AE1* and *AE2*; the gunboats *Protector* and *Gayundah*; the sloops *Fantome* and *Una* and the torpedo boat *Countess of Hopetoun*.

The *Encounter* had been lent for service while the *Brisbane* was building; the *Pioneer* was a British gift; the *Psyche* and *Fantome* were Royal Navy ships; the *Una* was a German vessel captured by the R.A.N. at Rabaul. All the foregoing were manned by Australians, with a considerable number of Royal Navy officers and ratings (on loan when war broke out) in the larger ships. Two Australian ships, the submarine depot-ship *Platypus* and the oil-tanker *Kurumba*, spent the war in European waters on loan to the Royal Navy.

At the close of the war the seagoing establishment of the R.A.N. was 325 officers and 4647 ratings (including R.N. on loan); the Royal Australian Naval Brigade comprised 151 officers (69 mobilized) and 4341 ratings (2099 mobilized).

The Inter-war Years. With the end of World War I the Admiralty released the Australian ships as soon as possible, but it was April 1920 before all were assembled in home waters under Australian control. Accompanying the returning ships were 12 newcomers—6 destroyers and 6 submarines, a gift from the British Government—so that at that date the effective forces of the Australian squadron were 1 battle-cruiser, 4 light cruisers, 12 destroyers, 3 sloops and 6 submarines. The light cruiser *Adelaide* was building, and was completed in 1922. In 1919, at the invitation of the Commonwealth Government, Lord Jellicoe surveyed Australia's naval defences and made recommendations concerning them. He reverted to the old "unit" scheme of 1909, and envisaged a Far Eastern fleet based on Singapore, the cost (approximately £20,000,000) to be shared by Britain, Australia and New Zealand in the proportions 75 per cent, 20 per cent, 5 per cent. Australia's share would be approximately £4,000,000 for a squadron (of which the above-mentioned ships would form a nucleus) of 2 battle-cruisers, 1 aircraft carrier, 8 light cruisers, 1 flotilla leader, 12 destroyers, 8 submarines, and ancillary vessels. The annual cost of maintenance and depreciation was estimated at about £4,000,000.

Australia now faced a changed naval situation. Since the beginning of the century she had rested under the protection of a powerful British navy and an Anglo-Japanese alliance which secured her in the Pacific. But although Britain emerged from

powers resumed building-up their forces. Australia followed suit, and with the conclusion of the three-year programme in 1937 she began a third programme, which was added to as international tension increased.

This programme included the acquisition of two more light cruisers (the *Hobart* and *Perth*); the building of two more sloops (the *Parramatta* and *Warrego*) and of two "Tribal" destroyers (the *Arunta* and *Warramunga*); the modernization of the cruisers *Australia* and *Adelaide*; and development of shore facilities. This programme was still in progress when war broke out in September 1939 (see WORLD WAR II, Naval Operations), at which time the Australian squadron consisted of the cruisers *Australia*, *Canberra*, *Sydney*, *Hobart*, *Perth*, and *Adelaide*; the destroyers *Stuart*, *Vampire*, *Vendetta*, *Voyager* and *Waterhen*; the sloops *Yarra* and *Swan*; and several ancillary vessels.

Throughout the period between the wars the R.A.N. benefited from the leadership, experience, and wise counsel of a succession of Royal Navy officers who served as First Naval Members of the Naval Board, and as rear-admirals in command of the squadron. Without exception they brought to their task sympathy with Australia's national aspirations and with the growing navy which they helped to mould. Its successful development was in no small way due to them.

Their representative as First Naval Member and Chief of the Naval Staff during the crucial pre-war years and also in the early years of the conflict was Admiral Sir Ragnar Colvin, to whose capable administration the navy owed much in its possession of an efficient, balanced force at the outbreak of war. The navy was also fortunate in having, as Secretary to the Naval Board, G. L. Macandie, who, first as secretary to Creswell in the formative years of the R.A.N., had occupied the key secretarial position throughout the navy's existence, and was rich in knowledge and experience. On the seagoing staff the squadron, which during World War I was largely officered and manned by Royal Navy personnel, was now predominantly Australian. Three graduates of the naval college (H. B. Farncomb, J. A. Collins and J. Burnett) had reached the rank of captain, and there were a number of commanders.

In general, officers and men, in association with those of the Royal Navy in ships on exchange duty or while taking courses at Royal Navy schools, acquitted themselves well. The R.A.N. which fought in World War II was an Australian force, in origin, outlook, and training.

War-time Expansion and Post-war Policy. When war broke out the R.A.N. totalled 16 ships. War-time expansion, largely as the result of shipbuilding in Australian yards, was so great that when the war ended in 1945 the R.A.N. had 317 ships in commission, many of which were seagoing com-

bat vessels. Among the ships built in Australian yards were 3 "Tribal" class destroyers, 60 corvettes, 12 frigates, 4 boom defence vessels, and a number of Fairmile motor launches, harbour-defence motor launches, and miscellaneous craft. (See SHIPBUILDING.) In addition, much repair work, conversion and arming work was carried out on both British and Allied ships. Two graving docks were built: the capital-ship dock in Sydney, completed in March 1945, and a cruiser dock in Brisbane, opened in June 1944. Items of naval armament, including torpedoes, mines, and shells, were manufactured in Australia; and naval victualling stores were provided for the R.A.N. and Allied navies in large quantities.

In 1939 the manning strength of the R.A.N. was 5440 officers and men. At the conclusion of hostilities in 1945 the total was 39,900 mobilized officers and ratings, including 2600 women. Apart from those serving in Australian ships and establishments, R.A.N. officers and ratings served in the Royal Navy, and as gunners in defensively-armed merchant ships, and in mine-disposal services. In June 1944 approximately 500 (of whom 400 were members of the R.A.N.V.R.) were serving with the Royal Navy.

The inclusion of women in the R.A.N. resulted from a shortage of trained telegraphists. In response to a newspaper advertisement appealing for radio amateurs to enlist as telegraphists, Mrs F. V. McKenzie, who had established the Women's Emergency Signalling Corps in Sydney in 1939, offered the services of members of the corps. The naval Director of Signals and Communications recommended to the Naval Board that they be employed as telegraphists at shore establishments; and 14 applicants selected from the corps took up their duties at *Harman* wireless station, Canberra, on 28th April 1941. From this beginning the W.R.A.N.S. grew to a peak war-time establishment of 105 officers and 2518 ratings engaged in many activities and serving in all mainland establishments.

The Commonwealth Government's post-war naval-defence policy, announced in June 1947, envisaged a carrier task force as the spearhead of Australia's naval power, with emphasis on anti-submarine warfare. A five-year programme, covering estimates of £75,000,000, allowed for an establishment of 26 ships (including two aircraft carriers) in commission, and 79 ships in reserve, with manning total of 14,750 officers and ratings. Various causes, mainly a shortage of manpower, prevented this programme from being realized, and it was abandoned. The principle of maintaining a carrier task force as the spearhead of naval power was, however, maintained, as was the emphasis on anti-submarine warfare; and in 1955 the establishment aimed at in the five-year programme was realized in the number of ships in

commission, although only about half those which in 1947 were visualized as a reserve were in reserve in 1955. Moreover, manning was 1839 below the five-year programme figure.

The post-war manpower shortage led to the re-establishment of the W.R.A.N.S., which branch had been disbanded at the end of the war; and the 1947 decision of the Government regarding post-war defence policy naturally led to the creation of a Fleet Air Arm to man the carriers of the task force. Flying and non-flying personnel of this branch are naval officers and ratings. A proportion of the naval pilots and observers is drawn from permanent-service officers of the executive branch; but others are entered on short-service commissions open to candidates between the ages of 17 and 24 years, with the right physical and educational qualifications. (See also AVIATION, Service Aviation.)

For some time after the war, in the reconstruction period, reserve training was discontinued, but it was resumed in 1950. The number of ratings serving voluntarily in the Reserves in 1955 was fewer than it was in 1939, but the total number serving had increased. This was due to the introduction of National Service in 1951. Under the National Service Act, National Service ratings are borne on the R.A.N.R. for five years from the beginning of their training, and they are liable for mobilization in time of war. Another factor contributing to the growth of reserve rating strength was the increase in the numbers of Royal Australian Fleet Reserves.

The shortage of manpower continued, in 1955, to be one of the most serious problems against which the navy, in common with the other Services—had to contend; and in 1956 a campaign was opened in the United Kingdom to enlist Royal Navy ratings in the R.A.N.

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NEALES RIVER, usually known as "The Neales", an intermittent stream in the north of South Australia, which rises as two branches in Stuart's Range to the west of Oodnadatta and flows generally in a south-easterly direction into Lake Eyre. It is about 200 miles long. Normally the Neales is merely a dry channel but in flood it flows some miles wide. The country which it crosses is arid and has little economic significance. Its name commemorates John Bentham Neales, an early South Australian auctioneer and member of Parliament. See map CENTRAL AUSTRALIA.

NEALIE or *Nelia*, an aboriginal name and the accepted vernacular name for the wattle (*q.v.*) species *Acacia loderi*, a small umbrella-like tree of calcareous inland plains in New South Wales and

South Australia. It is also applied to the shrub *A. rigens*, which favours mallee country in these two States and extends into Victoria.

NEEDLE-FISHES, an alternative name for the long toms (*q.v.*), fishes in which the upper and lower jaws are produced forwards and equipped with needle-like teeth.

NEEDLEWOOD or Needlebush, popular names for *Hakea leucoptera* and *H. vittata*, dry-country shrubs or small trees possessing rigid acicular leaves. The former species, the silver needlewood, is also known as water-bush or water-tree.



SILVER NEEDLEWOOD
Hakea leucoptera
Flowering branch and (left) an opening fruit

H. preissii is called needle-tree in Western Australia, and the so-called "nealie", *Acacia rigens*, is sometimes referred to as needle-bush, because of its long terete phyllodes. J.H.W.

(See also HAKEA.)

NEILSON, John Shaw (1872-1942), poet, son of John Neilson, a Scotsman, was born at Penola, S.A., on 22nd February 1872. His father, who had been taken to Australia at the age of nine and had received little education, was variously a shepherd, a shearer, and a small farmer, and knew hard times all his life; he was also a writer of verse, and in 1893 wrote a prize-winning poem in a literary competition conducted by the Australian Natives' Association. A small collection of his poems, *The Men of the Fifties*, was published in Melbourne in 1938, 16 years after his death.

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the war with the most powerful fleet, she was economically impoverished and had no capital-ship building programme. On the other hand both Japan and the United States of America had large naval building-programmes under way, and were entering a stage of national and naval rivalry which shifted the naval strategic centre from the North Sea to the Pacific. There was increasing hostility in the United States (reflected in Canada) to the Anglo-Japanese alliance, the future of which was in doubt. This was of concern to Australia, the more so since the allotment to Japan under League of Nations' mandate of the German Pacific islands north of the equator brought Japan south to within close proximity of Australian mandated territory in the Bismarck Archipelago and Solomon Islands.

It was a situation made more uneasy by Japan's irritation at Australia's policy restricting Asian immigration, and by Britain's announcement, early in 1921, that she could no longer guarantee complete naval protection of the Empire and that the Dominions must do their share.

In these circumstances Australia sought friendship with Japan and at the Imperial Conference of 1921 pressed hard for the continuation of the alliance, supported by New Zealand but strongly opposed by Canada. No decision was reached at the conference, but the seed of the dissolution of the alliance was sown, and the fruit gathered with the conclusion of a Pacific treaty between the British Empire, the United States, France and Japan, ratification of which brought the Anglo-Japanese alliance to an end. This treaty was a preliminary to the Washington Conference on the limitation of naval armaments, attended by the British Empire, the United States, Japan, Italy and France, in 1921-2.

The result of the Washington Conference was to establish capital-ship and aircraft-carrier ratios for the three main powers on a 5:5:3 basis, in terms of a total tonnage of 525,000 and 135,000 each for the British Empire and United States, and 315,000 and 81,000 for Japan. No limitations were placed on other categories except that no ship therein was to exceed 10,000 tons or carry guns larger than 8-inch. France and Italy were each allotted 175,000 tons and 60,000 tons respectively for capital ships and aircraft carriers.

The effect on Australia was that the limitation on capital-ship tonnage necessitated her scrapping the battle-cruiser *Australia*, and ruled out any possibility of the establishment of the Far Eastern Fleet visualized by Jellicoe. Instead there was born the "main fleet to Singapore" theory, under which Britain undertook to send to Singapore (where a major base would be constructed) in time of emergency a fleet capable of controlling sea communications in the Far East, thus ensuring Australia against invasion.

This theory became the foundation of Australian naval defence. By arrangement with the British authorities Australia provided and maintained a squadron capable of protecting floating trade in Australian waters, and Australia against seaborne land raids, and of co-operating with the Royal Navy in wider spheres as circumstances offered or dictated; on the "main fleet to Singapore" theory reliance was placed for the over-all defence of the Far East. In providing and maintaining her own squadron there were, in the 1920s and 1930s, three main developmental programmes.

The first of these, begun in 1924 and completed in 1929, provided the squadron with two 10,000-ton cruisers, the *Australia* and *Canberra*; two submarines, the *Otway* and *Oxley*; the seaplane carrier *Albatross*; a floating dock; and additions and improvements to shore establishments. The two cruisers replaced the *Sydney* and the *Melbourne*, which were scrapped in 1929. There was a lull during the period of financial depression in the early 1930s, in which the naval establishment was severely pruned and the number of ships reduced. In 1929 the last of the six British gift submarines was scrapped (the others had been broken up in 1924); during 1930-1 the six original Australian destroyers were scrapped; and in 1932 the submarines *Otway* and *Oxley* were presented to Britain and the three sloops were broken up. There were drastic cuts in the permanent forces; and in 1930 the naval college was moved to Flinders Naval Depot as an economy measure.

Overseas there were further attempts to limit naval armaments by the 1930 London Treaty, which extended the Washington limitations to other categories; but these were offset by international developments—the rise of Hitler in Germany, the growing aggressiveness of Japan and Italy—and in 1932 there arose in Australia a demand for the strengthening of defences. This began modestly with the construction of a sloop, the *Yarra*. In the following year the six British gift destroyers were scrapped, and replaced by the flotilla leader *Stuart* and four destroyers, the *Vampire*, *Vendetta*, *Voyager* and *Waterhen*, lent by the Admiralty.

In 1934 the Commonwealth Government embarked on the second developmental programme, one of three years, with the purchase from Britain of the modern light cruiser *Sydney* to replace the *Brisbane*, the building of a second sloop, the *Swan*, and the expansion and improvement of various shore facilities.

The international situation continued to deteriorate. An attempt to negotiate another naval limitation treaty in 1935 failed when Japan withdrew and Italy failed to ratify. Among the nations which adhered, qualitative limitation (of the size of ships) was adopted in lieu of quantitative limitation (of the number of ships), and the naval

COOK, James (1728-79), circumnavigator, discoverer of eastern Australia, was born at Marton-in-Cleveland (near Middlesbrough, Yorkshire) on 27th October 1728, the second child of James Cook and his wife, Grace Pace. His father was then a farm-labourer, but soon afterwards was made bailiff of Airy Holme farm, near Great Ayton. Young Cook worked on the farm, was for a short time a stable-boy at Ayton Hall, received some education at the village school, and at the age of 17 was apprenticed to a grocer at Staithes, near Whitby.

The sea called him, however, and about 18 months later his master cancelled his agreement and introduced him to John Walker of Walker Brothers, Whitby coal-shippers, under whom he signed indentures for three years. His first voyages were made in the collier *Freelove* (450 tons), and later the *Three Brothers* (600 tons). At the end of his apprenticeship he was made an A.B. in the *Mary*, trading to the Baltic; and in 1752, at the age of 24, he was appointed mate of Messrs Walkers' latest ship, the *Friendship*.

During his apprenticeship Cook, as was the custom of the period, lived in his master's house when not at sea. This home life seems to have had a large share in moulding his future, for the long evenings were spent in improving his book-knowledge, with the constant help of Walker. It was then he acquired the grounding in navigation that was to stand him in such good stead.

Early Naval Service. When the Seven Years' War broke out, in 1755, Cook was offered command of the *Friendship*. But he had other plans: he left the ship, then lying in the Thames, and volunteered for service in the Royal Navy. On 25th June of that year he entered on board H.M.S. *Eagle* as an A.B. and in the following month was rated master's mate. There was nothing unusual in this, since volunteers, midshipmen, captains' servants, certain able seamen and masters' mates were near equivalent in rank and messed in the gunroom; they were appointed to the various offices as vacancies occurred in the ship. In the *Eagle* he served under Hugh Palliser, also a Yorkshireman, and saw fighting at the capture of a French East Indiaman in May 1756.

On 30th July 1757 Cook joined H.M.S. *Solebay* as master and in the following October was appointed to H.M.S. *Pembroke* in the same capacity. In that ship he was present at the operations on the St Lawrence River in 1758-9 and the attack on Quebec.

Cook was a neat and painstaking draughtsman with some mathematical training, and with these advantages he assisted Lieut. J. F. W. Des Barres and Samuel Holland, who had been chosen by General Wolfe as engineers to prepare a large-scale chart of the St Lawrence River. Cook received his initial training in the theory of surveying

from Des Barres and Holland, who were very accomplished surveyors, the latter subsequently becoming Surveyor-General of Quebec.

In September 1759 Cook was transferred to H.M.S. *Northumberland*, and while in her was particularly mentioned for "indefatigable industry in making himself master of the pilotage of the River St Lawrence". The *Northumberland* was afterwards present when St John's in Newfoundland was recaptured from the French; there also served another James Cook, first in the *Mercury* and then in the *Gosport*, with whom the navigator has been frequently confounded. At Halifax and St John's, Cook worked in co-operation with Des Barres on surveys of the harbours, and his good work in these waters induced Admiral Lord Colville to commend him highly to the Admiralty as a man of "genius and capacity . . . well qualified . . . for greater undertakings of the same kind".

Cook left the *Northumberland* in November 1762 at Portsmouth, taking with him this recommendation and a balance of £291 pay due for the commission. A few weeks later (21st December) he married Elizabeth Batts, aged 21, at St Margaret's, Barking, in Essex.

Early in 1763, various admirals requested the Admiralty that surveys might continue on their stations. Rear-Admiral Spry was given Des Barres to survey Nova Scotia, and Commodore Graves, the newly-appointed Governor of Newfoundland, asked for James Cook for the reason that he had already made surveys in that colony. On 19th April Cook was ordered to join Graves's ship, the *Antelope*, for passage to Newfoundland, with instructions to survey part of the coast and harbours of that island.

The survey was made at first in small vessels attached to the flagship; but when Palliser, Cook's former captain in the *Eagle*, succeeded Graves as Governor of Newfoundland, it was put on a proper footing. A small schooner, the *Grenville*, was commissioned in June 1764 with Cook in command, and in that vessel the survey was continued until 1768, the ship returning each winter to England. Cook's charts and sailing directions for Newfoundland waters earned him a high reputation as a surveyor. In addition while on the survey he made on 5th August 1766 a good observation of an eclipse of the sun, the results of which were communicated to Dr John Bevis, F.R.S. This had far-reaching consequences, for it brought him under the notice of astronomers and of the Royal Society.

First Voyage. In 1767 the Royal Society began to make preparations for observing in several parts of the world a transit of Venus across the sun's face that was due to occur on 3rd June 1769. For the South Seas, Alexander Dalrymple (*q.v.*) was recommended; but he demanded full control of the ship which the Admiralty had provided for the voyage. Hawke, the first Lord of the Admiralty,

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refused to give the command of a king's ship to a man not a king's officer. At the suggestion of Palliser and of Stephen (one of the Secretaries of the Admiralty) Cook was recommended as a suitable commander, being well known as a surveyor, a skilled observer, experienced in command, and available in England for the position.

On 24th March 1768 the President of the Royal Society, Lord Morton, announced that the King had placed a grant of £4000 at the society's disposal for the voyage; on 29th March the Navy Board purchased a cat-built bark for the voyage; on 12th April a successor to Cook was appointed to the Newfoundland survey; on 5th May Cook made his formal appearance before the Royal Society council; and on 26th May his commission as lieutenant was signed. Next day he joined the *Endeavour* at Deptford, where she was preparing for sea. (For a description of this vessel and a discussion of her rig see "Cook's Ships", below.)

The scientific staff of the expedition included Joseph Banks (*q.v.*), Daniel Solander (*q.v.*), and Charles Green, the astronomer. The *Endeavour* left England on 25th August 1768, "having on board 94 Persons, including Officers, Seamen, Gentlemen, and their Servants; near 18 Months' Provision, 10 Carriage Guns, 12 Swivels, with good Store of Ammunition and Stores of all kinds".

Cook's destination was Tahiti, recently made known in England by the opportune arrival of Captain Wallis of H.M.S. *Dolphin*, where he was to observe the transit of Venus. Fortunately, the Secret Instructions and Additional Secret Instructions issued to Cook by the Admiralty have become available since 1923 (when brought to light at auction and purchased by the National Library), and clearly show that the primary reason for the voyage was the wish to carry out exploration in the South Pacific.

The observations at Tahiti were successfully carried out, and the Society Islands were cleared on 9th August 1769. Cook now laid a course southward in order to strike, if it existed, the southern continent which Dalrymple and others believed balanced the masses of land in the northern hemisphere. On 2nd September, however, having reached lat. 40°S. without sighting land, and meeting with tempestuous weather, he turned north-west and after a while made south-west again in order to fall in with the land discovered and laid down by Tasman as Statenlandt.

This land—the eastern side of the North Island of New Zealand—he sighted on 7th October, and in the evening of the 9th landed on the shores of Poverty Bay, where four Maoris had to be killed before he could establish amicable relations with the rest—"the most disagreeable day my life has yet seen", noted Banks.

During the next six months Cook sailed right around New Zealand and charted with wonderful

accuracy the whole coastline of 2400 miles—perhaps the most remarkable of all his achievements. The Admiralty chart based on the survey remained little altered for 80 years. Having completed all the Admiralty instructions, he then called a conference of his officers to decide the route home. Three direct routes were possible in those days—via the Horn, via Van Diemen's Land and via Batavia. If it had been spring instead of autumn, he would have returned by the Horn for a further search for the southern continent; but although the *Endeavour* was still in fair condition she was not sound enough to face winter storms in high latitudes.

That circumstance meant that she could return only via Batavia; but the health of the crew and the state of the provisions permitted Cook to do further exploration and to gratify his own curiosity by deviating from the direct route to Batavia in order to make a running survey of the eastern seaboard of New Holland "to its Northern extremity; and if it should be found impracticable then to endeavour to fall in with the Land or Islands discovered by Quiros".

In this passion for extra work lay much of Cook's greatness, for most other commanders similarly placed would have made their way direct to Batavia, having fulfilled all the instructions issued to them.

The *Endeavour* fell in with the coast of Australia at Point Hicks (named after Zachary Hicks, the first lieutenant, who sighted it) at daybreak on 20th April 1770. This date, which differs from the date given in Cook's log, is correct by modern computation; all Cook's log-dates from 6th October 1769 to 9th October 1770 are subject to correction, since he had not when passing the 180th meridian of longitude made the change of date that is now customary. In Cook's time the practice was to wait until a vessel reached some port in the eastern longitudes that was already on the chart; and Cook made the required change when he reached Batavia on 10th-11th October 1770. In addition three times were kept on board the *Endeavour*: civil time, which began at midnight; ship's time, which began 12 hours before civil time; and astronomical time, which began 12 hours after civil time. To bring his New Zealand and Australian dates into correspondence with those now current it has been necessary to adjust the dates mentioned between 6th October 1769 and 9th October 1770, as follows: for Banks's and other civilian journals advance dates by one day; for Cook's and other seamen's logs and journals advance dates by 12 hours; for Green's journal retard dates by 12 hours.

From Point Hicks Cook worked northward, landing at Botany Bay on 29th April and spending a week there, and then proceeding up the coast to Torres Strait. In the following August, at Pos-

session Island, near Cape York, he annexed under the name "New South Wales" the coastline that he had charted for the first time. A more detailed description of his discovery of eastern Australia can be found under EXPLORATION BY SEA.

When the *Endeavour* reached England, in July 1771, Cook was highly commended by the Admiralty. He was appointed to command the *Scorpion*, but this was merely to keep him on the employed list; he was busily engaged on other duties at the time and never joined the vessel. In August he was presented to King George III (to whom he gave a copy of his journal and some charts) and was handed his commission to the rank of commander.

Second Voyage. Cook, Banks, and Solander at this time were "lions" in London society, and may there have met Hawkesworth, the voluminous and conceited writer who afterwards sophisticated Cook's straightforward narrative, adding his own absurd speculations to it with the intention of making the book readable and popular. But Cook had little time for writing; almost at once plans were made for a second voyage of South Sea exploration—Dalrymple and others having alleged that there was still room in the unexplored South Pacific for a continent—and two sloops, first named the *Drake* and the *Raleigh*, were purchased for the expedition, and later renamed *Resolution* and *Adventure*.

Cook himself largely compiled the secret instructions for the new voyage, which incorporated his plans for a complete circumnavigation of the world in high southern latitudes. In November 1771 he commissioned the *Drake* (*Resolution*), while Tobias Furneaux (*q.v.*) was given command of the *Raleigh* (*Adventure*). Plans were made to accommodate Banks and a staff of scientific workers by raising the *Resolution's* upper-works, but this caused the ship to be top-heavy. After much controversy, Banks withdrew from the expedition, and the ship was restored to her original condition. In Banks's place Johann Reinhold Forster (*q.v.*) joined the expedition as naturalist and his son Georg (usually known as George) as natural-history painter.

The ships left Plymouth in July 1772; visited Table Bay (30th October to 22nd November), where the naturalist Anders Sparrman joined the *Resolution*; ran down to the southern icefields, crossing the Antarctic Circle on 17th January 1773 for the first time in history; and then proceeded east towards New Zealand. Contrary winds prevented Cook from visiting Tasmania.

Furneaux, however, who had parted from Cook on 8th February, put in at Adventure Bay in Tasmania, and then ran up the east coast. The weather was bad, and he formed the opinion that only a deep bay existed north of the Furneaux Group instead of the strait which separates Tasmania

from the mainland. Cook, who had gone straight to Dusky Bay and thence to Queen Charlotte Sound, found the *Adventure* at anchor there and Furneaux reported his views about the Tasmanian shore-line. Cook thought of revisiting Tasmania to check this opinion; but Furneaux was positive, and the course of events did not guide the *Resolution* that way.

The rest of 1773 was spent in criss-crossing the southern Pacific until there was no unexplored space left in which a continent might lie. On 3rd November Cook was back in Queen Charlotte Sound, but Furneaux did not arrive; on the 25th, therefore, the *Resolution* sailed again for the south, and on 30th January 1774 Cook reached lat. 71° 10'S., a record which stood until 1823 when Weddell penetrated to 74° 15'S. in the Weddell Sea. He next went hunting for a patch of land in 38°S., said to have been seen by Juan Fernandez. That illusion being dispelled, he made by way of Easter Island and the Marquesas for Tahiti, thence round the Fiji group to the New Hebrides; he identified the discoveries of de Quiros, and on 5th September discovered New Caledonia and on 10th October Norfolk Island.

On 18th October he was back in Queen Charlotte Sound again, and on 10th November he left it to cross the ocean towards Magellan Strait along the line of lat. 54°S. Cape Horn was rounded on 29th December, South Georgia sighted and named on 1st January 1775, the South Sandwich Islands sighted on 30th January, and Table Bay revisited from 21st March to 27th April. Then Cook, having circumnavigated the globe in fairly high southern latitudes and so proved that no continent existed outside the Antarctic Circle, turned homeward and reached Portsmouth on 30th July.

There he found Furneaux, whose crew at the end of 1772 had come into conflict with the Maoris at Queen Charlotte Sound, a boat's crew of two officers and eight seamen being killed and eaten. Furneaux had then made his way back to England round Cape Horn, reaching Portsmouth on 14th July 1774.

Cook's second voyage was one of the longest and most dangerous ever undertaken, performed too with a loss of only four men in three years: three by accident and one by a "complication of disorders"—none from scurvy. Bold and correct in conception and execution, it disproved the long-held belief in the existence of a temperate southern continent.

In Cook's absence, Hawkesworth's account of his first voyage had been published in 1773; and its immediate success had made Cook a celebrated man. But Hawkesworth was now dead, and it was therefore proposed that Reinhold Forster should collaborate with Cook in producing the narrative of the second voyage, the navigator writing up the events of the voyage, the naturalist

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contributing a volume of scientific results. However, Forster made unreasonable demands and so became involved in a bitter dispute with Lord Sandwich, the first Lord of the Admiralty, and in the end Cook wrote the book and had it edited by Canon Douglas of Windsor. Many of Cook's letters to Douglas are in the British Museum.

During his stay in London Cook met James Boswell, who reported to Dr Johnson that the "celebrated circumnavigator" had, with conscientious accuracy, set right many of Hawkesworth's exaggerations.

In February 1776 Cook was elected a fellow of the Royal Society, and in the next month he read to the society a paper on his methods of preventing and curing scurvy—which constitute by no means the least of his services to Britain. The Copley gold medal—the highest honour bestowed by the Royal Society for the advancement of medical science—was presented to Cook's wife after he had sailed on his third and last voyage. He was presented to the King and promoted to the rank of post-captain during his time in London, and was given the prized appointment of Fourth Captain of Greenwich Hospital.

Third Voyage. At this time the old problem of finding a North-west Passage from Hudson Bay to the Pacific was again raised, and through Parliament a reward of £20,000 was offered, in 1776, for its discovery. The Admiralty had planned to make attempts at finding the route from both sides of the North American continent, and already ships had been sent to the Arctic.

On Cook's return the *Resolution* had been refitted for an expedition to the North Pacific, for the attempt from the western side. The question of a leader was discussed, the proposed commander being Charles Clerke, who had been Cook's second lieutenant on the previous voyage. The appointment of Clerke was considered because it was felt that Cook deserved a long rest. When, however, in January 1776 Cook volunteered to take command, his offer was gladly accepted. Clerke was given command of the consort vessel, H.M.S. *Discovery* (formerly *Diligence*), which was specially purchased for the voyage.

On 12th July 1776 Cook in the *Resolution* left Plymouth Sound, with orders to sail via the Cape to New Zealand and Tahiti, and thence to the "New Albion" (the coast of Oregon) of Francis Drake in about lat. 45°N., and to work up the North American coast in the hope of finding a passage round the continent eastward or round Asia westward. The *Discovery*, which did not leave Plymouth till 1st August, joined him at Table Bay.

On his way east Cook visited the Marion and Crozet groups and Kerguelen Island, and in January 1777 put into Adventure Bay in Tasmania. On 12th February he was in Queen Charlotte Sound; then, by way of the Cook and Friendly

groups (at the latter he observed an eclipse of the sun), he voyaged to Tahiti (spending almost four months in the group), and north to Christmas Island (25th December).

On 18th January 1778 he discovered what are now known as the Hawaiian Islands, which he named after Lord Sandwich. There has been much controversy as to whether these islands were known to Europeans prior to Cook's discovery of them, but it is generally conceded that if white men did land in the group it was by shipwreck and that they did not return to civilization. Cook could not explore the group at that time as he had to proceed north-east to the coast of Oregon (7th March) and Nootka Bay (30th March), where the ships anchored for a month.

The summer was spent in a vain attempt to find a passage to the Atlantic, at first round Alaska, then west along the Siberian coast. On 29th August Cook reached a point which he named Cape North—probably Cape Ryrkain, south of Wrangel Island—but could get no farther because of adverse winds.

In September he turned south to winter in the Hawaiian Islands, visiting the Russian settlement at Unalaska en route. On 25th November he reached Maui, where the natives were more honest and less suspicious than any he had yet met. Five days later he sighted Hawaii itself, and after thoroughly charting the island he spent about a fortnight (January-February 1779) at Karakakoa (Kealakekua) Bay in amicable intercourse with the natives, who brought him great quantities of supplies. Always thoughtful of native interests, he felt that he had made inroads on their stores, and had better move elsewhere; but when he put to sea gales sprang up, the *Resolution's* foremast gave way, and he was forced back on 10th February, less than a week after his departure.

For a reason that has never been discovered—the bay natives may have felt that they were being exploited, and that it was someone else's turn to provide the ships with food—on this second visit the behaviour of the natives altered completely. They resented the landing of watering parties, stole articles from the ship and even the *Discovery's* cutter from its moorings at the anchor buoy, and roughly handled several members of the ships' crews.

On 14th February, the day after the stealing of the cutter, Cook landed with an armed guard to visit the king and take hostages against its return. A cordon of armed boats was stationed round the bay to stop all traffic. With Cook were the Marines officer Phillips and nine Marines; the *Resolution's* launch, under Lieut. John Williamson, stood off shore to give support.

The natives, numbering many thousands, were in an ugly mood; Cook, therefore, gave up the attempt to secure hostages and returned to the

beach. While doing so, news came that a chief had been shot when passing the cordon of boats. Fighting immediately broke out between the natives and the landing party.

To the surprise of the Englishmen, the natives withstood the volley of musketry and rushed the small party before they could reload. Four Marines were killed, and three others, including Phillips, were dangerously wounded. Cook at the water's edge called to the boats to pull in; in doing so he made the fatal mistake of turning his back to the natives, and he was thereupon knocked down, held under water, dragged ashore and butchered.

Williamson in the launch failed to give the necessary support, and his boat did not fire a shot. He also failed to bring off the bodies of the Englishmen when the beach had been cleared of natives by cannon-fire from the ships.

Cook's death was largely the result of his own misjudgment of how the natives would behave, since in other islands the mere sound of musketry had been sufficient to quell any signs of resistance to his policy of obtaining hostages. During 15th February it was ascertained that Cook's body had been in part cooked or burnt; whether it was eaten is still disputed by historians.

The natives still remaining hostile and insolent, their village was fired on the 17th; and on the 20th and 21st what was left of Cook's body (part of the skull and scalp, the hands and the bones of the limbs) was brought down with solemnity to the beach by a chief, handed over to Clerke (who was now in command) and at sunset buried at sea, the *Resolution* firing minute guns in a funeral salute of 10 rounds.

On 16th March Clerke left the group to continue explorations in the Arctic seas. The summer was spent in further attempts to pierce the ice-pack beyond Bering Strait, and at the approach of winter Lieuts Gore and King (Clerke having died of consumption on 22nd August) brought the two ships down the Asiatic coast to Macao (1st December) and thence via the Cape to England, which was reached on 4th October 1780.

News of Cook's death, however, had reached England the previous January, having been sent on from the Russian port of St Peter and St Paul (Petropavlosk) on the coast of Kamchatka.

"Illustrious Navigator". As a circumnavigator Cook stands unequalled—first for the magnitude of the work that he did in so short a time, second for the accuracy of that work, and third for the preservation of the health of his people. The three great voyages were completed with less hardship and loss of life than had hitherto been thought possible.

Cook's efficiency as an explorer was due principally to his training as a hydrographic surveyor, which accustomed him to penetrating into shoal waters with confidence; he learned to survey and

chart only what he could plainly see. Such attention to detail was lacking in previous navigators of the South Seas, who missed many discoveries by keeping to deep water. In that respect Cook's methods and professional training founded a school of efficient navigators, with a tradition, passed on to other maritime nations, of producing excellent hydrographic surveys that differed greatly from the crude sketch surveys of the earlier navigators.

In appearance Cook was tall (more than 6 feet), very tough in physique, and rather severe in countenance. His one defect in character was his hasty temper; yet his incessant care for and interest in his men, his personal courage, and his temperance in his living habits won him respect and affection from all with whom he worked.

Dumont d'Urville said of Cook that he was the "most illustrious navigator of both the past and future ages, whose name will for ever remain at the head of the list of sailors of all nations". Another great French contemporary, in the last spoken words of his which history has recorded, paid a graceful tribute to the Englishman: La Pérouse, as he was leaving Botany Bay (January 1788), said to Lieut. P. G. King, "In short, Mr Cook has done so much that he has left me nothing to do but admire his work."

Cook's services had been recognized by promotion to commander upon his return from the *Endeavour* voyage, and to post rank on his return from the second voyage. The King now granted a coat of arms to his family and a pension of £250 per annum to his widow. The Royal Society struck a special gold medal in his honour and presented it to Mrs Cook.

Cook's Relatives. Cook's family soon became extinct in the direct line; he had six children, of whom three died in infancy and the others before the end of the century. James, the eldest, rose to command H.M. sloop *Spitfire*, and in 1794, when being taken by a hired boat to his ship as she lay at anchor in Poole Harbour, was either murdered or drowned. He was unmarried. Nathaniel, the second, was lost at the age of 16 in H.M.S. *Thunderer*, which foundered during a hurricane in the West Indies (1780). Hugh, the youngest of all, died in 1793, when only 17, at Cambridge, where he was studying for the Church. Mrs Cook lived to be 93, and died at Clapham on 13th May 1835. Her will was sworn for probate at under £60,000—a fortune derived principally from the sale of her husband's publications.

Memorials. The value of Cook's discoveries along the Australian coast is recognized in several memorials. In Hyde Park, Sydney, there is a statue of him by Thomas Woolner, R.A., which was unveiled in 1879; and his landing place at Botany Bay is marked by a monument, near which the landing is annually commemorated.

Tablets are also placed on Cape Everard, near the hill first sighted from the *Endeavour*; on Mount Warning, a "remarkable high peak" noted in Cook's log; on Possession Island in Torres Strait, where he formally annexed the eastern coast to Britain; and in Whitsunday Passage.

Throughout the world there are several hundred memorials erected in Cook's honour. His journals have been translated into many languages.

"COOK'S COTTAGE". In 1934 a cottage that had been built at Great Ayton, Yorkshire, by Cook's father was bought at auction for £800 by Wilfrid Russell (later Sir Russell) Grimwade, a Melbourne business man, who presented it to the Victorian Government. Under careful supervision the cottage was dismantled, packed into 250 cases, and shipped to Australia.

The cottage was re-erected in the Fitzroy Gardens, Melbourne, and opened for public inspection in October 1934. However, many visitors carved or pencilled their initials on the woodwork and stone, and in 1940 the cottage was closed to the public for a short time; thereafter a custodian was engaged. Visitors are not allowed in the upper story, which cannot carry heavy loading.

Cook was already 27 years old and a seaman in the navy when the cottage was built (1755), and after his marriage in 1762 he lived in London during his infrequent periods ashore. He stayed in the cottage only while visiting his parents from

time to time. The cottage remains, however, the oldest building in Australia.

COOK'S SHIPS

Relics of Cook exist in museums throughout the world. In Australia, collections of objects that he either used or acquired, including navigational instruments, ethnological specimens, manuscript papers and personal belongings, are preserved in the Australian Museum, the Mitchell Library and the Dixon Gallery, Sydney.

Cook's early experience in North Sea colliers convinced him of the suitability of those vessels for exploration. Whether he had any part in the selection of the *Endeavour* for the voyage to the South Seas is not known however. Dalrymple claimed in 1773 that he had chosen the vessel, but correspondence still in existence at the Admiralty shows that the selection was an official matter between the Navy Board and the yard officers at Deptford. The latter, having failed to secure a suitable naval vessel, recommended for purchase from a number of vessels the *Earl of Pembroke*, a collier owned by Thomas Milner of Whitby, where the vessel was built in 1764.

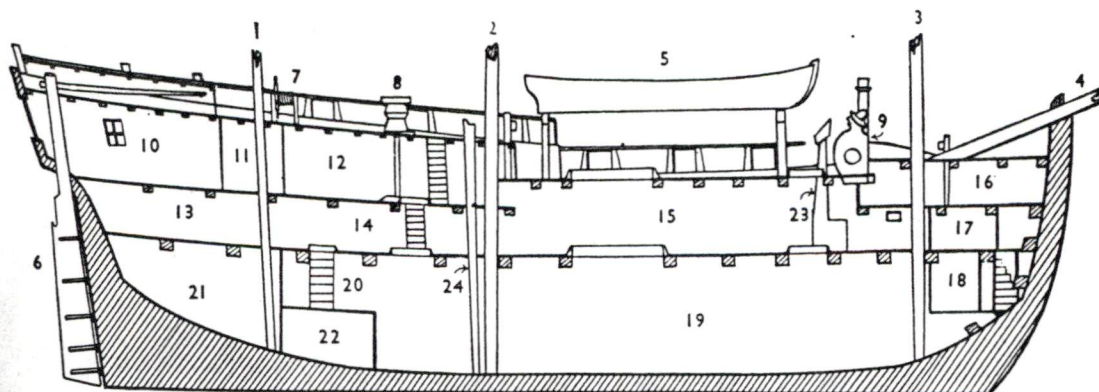
The date of purchase was 29th March 1768, and the price £2800. On 5th April following the Admiralty informed the Navy Board that the vessel was to be registered on the list of the Royal Navy as a bark by the name of *Endeavour*.

H.M. BARK ENDEAVOUR

A diagrammatic section of the interior

After the original dockyard plans in the National Maritime Museum, Greenwich, England

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|---|---|
| 1. Mizen-mast | 13. Wardroom and officers' cabins |
| 2. Mainmast | 14. Gunroom and junior officers' quarters |
| 3. Foremast | 15. Lower deck (for the seamen) |
| 4. Bowsprit | 16. Forecastle (for the petty officers) |
| 5. Longboat | 17. Warrant-officers' cabins |
| 6. Rudder | 18. Magazine |
| 7. Wheel | 19. Hold |
| 8. Capstan | 20. Steward's store-rooms |
| 9. Winch and belfry | 21. Lazaret |
| 10. Great cabin | 22. Fish room |
| 11. Cook's and Banks's sleeping cabins | 23. Ship's galley |
| 12. Cook's and the gentlemen's messroom | 24. Pumps |



The *Endeavour's* burthen was 368 $\frac{3}{4}$ tons, its length on the lower deck 97 ft 7 in., its length of keel 91 ft (for tonnage 81 ft), its extreme breadth 29 ft 3 in., and its depth of hold 11 ft 4 in.

Extensive alterations were made to the vessel, including the building of an additional deck and the raising of the quarter-deck to provide extra cabins for the scientific staff. Practically all the masts and yards were renewed, and stores, both provisions and equipment of the first quality, were purchased. The cost of these alterations, including the rigging and stores, amounted to £5394.

Having no figure-head and only a straight stem, the *Endeavour* was designated a "bark", the name which distinguished such a vessel at that time. This term, in after years, led to much confusion as to her rig, because a type of vessel designated "barque" (square sails on fore- and main-masts, fore-and-aft sails on mizen-mast) became popular in the nineteenth century. The *Endeavour's* plans and measurements (including masts and yards) are still in existence at the Admiralty, and plainly show her to be ship-rigged, with square sails on all three masts. No contemporary painting of the vessel appears to have survived.

On her return to England from the South Seas the *Endeavour* was refitted extensively and employed on four voyages to the Falkland Islands, carrying stores. In March 1775 she was sold out of the Royal Navy for £645.

There has been much speculation as to the ultimate fate of the *Endeavour*, one legend being that in 1790 she became a whaler under French colours, bearing the name *La Liberté*. In that role, it is claimed, she eventually ended her days on the beach at Newport, Rhode Island. It is most likely, however, that this *Endeavour* was confused with another vessel, for *Endeavour* was then a popular name for colliers. It should be remembered that Cook's *Endeavour* underwent arduous service in the Royal Navy and that wooden vessels in those days deteriorated quickly under such conditions. Her life-span probably did not exceed 20 years, and by 1790 she would probably have been a hulk.

Cook's ship on his second and third voyages was a larger collier than the *Endeavour* by about 100 tons. She was built by Fishburn at Whitby in 1770 for William Hammond of Hull, who named her the *Marquis of Gransby*. She was bought into the Royal Navy in 1771, renamed the *Drake*, and by Admiralty order in December 1771 again renamed the *Resolution*, which in Cook's opinion was "much properer".

Very extensive alterations were made to the collier in Deptford dockyard, including the raising of her upper-works and the addition of a figure-head (a seahorse). The former alteration was made to permit the accommodation of Banks's large retinue of scientists, artists and servants. The ad-

dition of the figure-head was to give the collier the appearance of a man-of-war. These alterations cost the very large sum, for those days, of £10,080.

The top-hamper, however, made the *Resolution* unsafe, and as the ship was to venture into Antarctic waters it was decided to restore her to normal by the removal of the top-hamper. This was done at a cost of £882. Banks began a bitter correspondence with the Navy Board in which he advocated the acquisition of another vessel, preferably a 40-gun ship or a frigate of the East India Company, which would allow sufficient accommodation; but in May 1772 the Navy Board, after hearing Cook's opinion in the matter of what was a proper vessel, namely a north-country-built ship designed for the coal-trade, authorized the *Resolution* to be finally altered for the voyage.

The *Resolution's* burthen was 461 $\frac{3}{4}$ tons, its length on the lower deck 110 ft 8 in., its length of keel for tonnage 93 ft 6 in., its extreme breadth 30 ft 5 $\frac{1}{2}$ in., and its depth of hold 13 ft 1 $\frac{1}{2}$ in. The vessel was rated a sloop of 12 guns (6-pounders) and she carried 12 swivels as well. Her complement was 110 men.

When the *Resolution* returned to England in 1780 she was converted into an armed transport. In March 1781 she sailed for the East Indies, but in June 1782 she was captured by the French ship *Sylphide*, a unit of De Suffren's squadron. After the action of Negapatam, the *Resolution* under French colours was sent, on 22nd July following, to Manila for wood, biscuit and rigging, and to enter any seamen she found there. About a year later De Suffren expressed the fear that the vessel had foundered, or been captured, as she had not been heard of since being seen in the Strait of Sunda.

Ten years later, John Barrow (afterwards Secretary to the Admiralty) reported seeing a coal-hulk at Rio de Janeiro, which he thought was Cook's *Resolution*; but this is doubtful. The ending of this historic vessel is therefore unknown.

The *Resolution's* consort on Cook's second voyage, the *Adventure*, was also built by Fishburn at Whitby, and bought into the navy in 1771. Her burthen was 336 tons, length 99 ft, breadth 28 ft, and depth 12 ft. Her complement was 81 men. In 1783 she was sold out of the navy, and resumed her career in the coal-trade for many years, until she was finally wrecked in the St Lawrence River in May 1811.

The consort for the third voyage was the *Discovery*, also Whitby-built and bought into the navy in 1776. Her burthen was 299 tons, length 91 ft, breadth 27 ft, and depth 11 ft. Her complement was 70 men. Her subsequent career was as a convict-hulk lying at Sheerness from December 1805 until May 1818, and at Woolwich from May 1818 until November 1833. In February 1834 she was broken up at Deptford.

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Bibliography (see also AUSTRALIANA). Sir Maurice Holmes's *Captain James Cook, R.N., F.R.S., A Bibliographical Excursion* (1952) lists the principal works concerning Cook's life, voyages and publications. A *Bibliography of Captain James Cook, R.N., F.R.S., Circumnavigator*, issued by the Public Library of New South Wales in 1928, lists much additional miscellaneous matter, including manuscripts and drawings, which could be greatly added to by the inclusion of the considerable amount of material found or published since that year. In 1956 the Hakluyt Society of London had begun to publish Cook's own narratives of his three famous voyages; these publications were expected to contain much bibliographical material and to be the final authority for the three voyages.

The best life of Cook is probably Hugh Carrington's *Life of Captain Cook* (1939), but Arthur Kitson's *Captain James Cook, R.N., F.R.S., "The Circumnavigator"* (1907) is still excellent; an abridged edition of the latter work was issued in 1911. A short, informative biography, Lieut.-Commander Rupert T. Gould's *Captain Cook* (1935), is particularly valuable in regard to geographical questions; Surgeon Rear-Admiral John R. Muir's *The Life and Achievements of Captain James Cook, R.N., F.R.S.* (1939) discusses in detail Cook's success in the field of hygiene. A small work by Professor G. Arnold Wood, *The Voyage of the Endeavour* (1926), is still the most readable and entertaining account of the famous voyage. Dr J. C. Beaglehole's *The Exploration of the Pacific* (2nd ed., 1947) contains an excellent account of Cook's work as a whole in the Pacific. The Secret and Additional Secret Instructions issued to Cook were first published in the Navy Record Society's *Naval Miscellany*, vol. 3 (1928).

Much material of a controversial nature has been published concerning Cook's voyages. Many relevant manuscripts are available in Australian libraries, including the very important holograph manuscript copy of Cook's personal journal kept on board the *Endeavour*, which is the principal treasure of the National Library, Canberra. This journal was purchased in 1923 in an auction of documents owned by H. W. F. Bolckow, of Marton-in-Cleveland; it apparently had been acquired by Bolckow's grandfather from Mrs Cook's executors some time after 1835.

(See also EXPLORATION BY SEA.)

COOK, Sir Joseph (1860-1947), Prime Minister of Australia, was born at Silverdale, Staffordshire, in December 1860, and commenced work in a coalmine at the age of nine years. Migrating to Australia in 1885, he worked in the mines at Lithgow, N.S.W., until 1891, when he was elected to the Legislative Assembly of New South Wales as Labour member for Hartley.

In 1893 the Labour party declared itself neutral on the fiscal question, but when matters connected with the tariff were under discussion schisms occurred and Cook was chosen leader of the free-trade section. In March 1894 a Labour conference confirmed a proposal that every Labour candidate should pledge himself "to vote in the House as a majority of the Party, sitting in Caucus, has determined". Cook, refusing to take such a pledge, left the party, and on 3rd August entered George Reid's Ministry as Postmaster-General.

In 1898 he became Minister for Mines, a position he retained until the Government was defeated in 1899. He held the Hartley seat as long as he remained in New South Wales politics, and built up a reputation as an efficient administrator.

In March 1901 Cook entered the House of Representatives as member for Parramatta, a constituency he continued to represent for 20 years. In the first Parliament he was merely one of the back-bench, free-trade opposition, but he established a reputation as a competent debater. When Reid, in 1905, gave up all hope of effecting a coalition with Alfred Deakin (who was then in office), he determined to make his opposition a more effective force in the House and offered the position of deputy-leader of the party to Cook.

Reid resigned in 1908 and Cook took his place as leader, and in the following year he led the party into a coalition with Deakin. As Minister for Defence in this coalition Cook assisted in the establishment of an Australian naval unit, and invited Lord Kitchener to visit Australia to advise on a compulsory military training scheme. When the coalition was displaced and Labour took office (as a result of a double dissolution in 1910), Cook gradually replaced Deakin in all active debate, and, succeeding him as leader in 1913, became Prime Minister in that year.

Defeated next year, as leader of the Opposition he gave the Government full support on all war measures. In 1917 he joined a coalition ministry, under W. M. Hughes, as Minister for the Navy, was one of the Australian representatives at the Versailles Peace Conference, returned to become Treasurer of the Commonwealth, and left politics in 1921 to become High Commissioner for Australia in London. He occupied that office until 1927, when he retired and returned to Sydney. There he lived privately until his death, which occurred on 30th July 1947. He was survived by his widow, Dame Mary Cook, five sons and three daughters. He had been awarded the honour of P.C. in 1914 and G.C.M.G. in 1918.

On hearing of Cook's death, W. M. Hughes said: "As a colleague he stands out more than any other man with whom I have been associated as the most reliable and helpful of men. He was a great debater, a dour fighter, and underneath all that a most lovable personality."

Having flown in 1929 over the great area of desert—about 56,000 square miles in extent—that stretches north-west from the “corner” of south-western Queensland and the Northern Territory, Madigan accepted in 1939 an offer by A. A. Simpson of Adelaide to finance an expedition that would attempt a crossing of the area with the aid of camels. This feat was duly accomplished, although at one stage the expedition came near to being marooned in the Dead Heart through feed giving out before the rain-belt of Queensland storms was reached. The lives of the party (eight in all) depended entirely on those ancient allies of man, the camels, which took in their stride 806 appalling sandhills before reaching the haven of Birdsville.

Madigan supplies in his book, *Crossing the Dead Heart* (Melbourne, 1946), the history of the region, with records of former attempts that ended in tragedy; general gossip regarding the nature of the country; and, above all, a clear general impression of what the great region of Central Australia means to the Commonwealth. He laments that Simpson, the man after whom the desert was named, did not live to read the story of the expedition which his public spirit made possible; but, as it happened, Madigan himself died, at the age of 57, just before the book was published.

Conclusion. Looking back over more than a century and a half, it becomes abundantly clear that the records of Australian exploration by land provide a fascinating story, one that is shot through with examples of courage, fortitude, and high endeavour on the part of men of various nationalities. In the present article nothing more than a summary has been attempted, but some indication has been given of the fact that not only the major explorers, but many men whose names are less familiar, contributed very materially, often in the face of grave hazards, to the opening-up of the continent.

Today, the map of the Commonwealth is practically complete. Aside from the work of Mackay and Madigan, and of various adventurers who have examined secluded areas of the north, expeditions during the present century have been devoted chiefly to zoology, botany, and anthropology. As was the case during the previous century, numbers of men from other countries, as well as Australians, have latterly done work in these sciences in various little-known parts of Australia. In particular, much has been achieved by expeditions designed chiefly to study the aborigines of Central Australia and Arnhem Land, and a good deal of similar research has been carried out in the north of Western Australia. During the course of their work, members of such parties have gained experience of the geography and general topography of the areas visited.

Yet, even Australia which seldom if it includes portions, certain areas are western Australia the interior

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ment of discovery”, and it is possible, too, for them to share in fancy the pleasure that the same explorer felt when his feet “pressed for the first time a new and rich country”.

BIBLIOGRAPHY: Basic sources of information regarding exploration by land are the journals of the explorers concerned, all of which are mentioned in the relevant biographies. Other sources are books dealing with the work of particular explorers and numerous articles in historical, geographical and general scientific journals. Writers who have published works dealing with Australian exploration either as a whole or in part include the following: E. Favenc, *The History of Australian Exploration* (1888), and *Explorers of Australia* (1908); A. F. Calvert, *Exploration in Australia* (1895); R. Logan Jack, *Northmost Australia*, 2 vols (1922); Sir E. Scott, *Australian Discovery*, vol. 2 (1929); R. V. Billis and A. S. Kenyon, *Pastures New: an account of the pastoral occupation of Port Phillip* (1930); G. Rawson, *Desert Journeys* (1948). Some details of the exploration of Tasmania are given in J. Fenton, *History of Tasmania* (1884); and R. W. Giblin, *The Early History of Tasmania*, vol. 2 (1939).

EXPLORATION BY SEA. The earliest voyage of exploration in Australian waters which can be substantiated by historical records was that by a Dutch vessel, the *Duyfken*, in 1606. Hypothetical arguments on prior discovery of Australia by European navigators have been advanced by various noted historians and geographers, but their theories cannot be borne out entirely by documents now extant.

Some discussion on the possibilities of navigation in Australian waters earlier than the seventeenth century is a necessary prelude to the narrative of the known history of discovery and exploration of Australia's coastline.

Asiatic Voyages. In matters of naval architecture, navigation and seamanship, it is known definitely that Chinese, Indian, Malayan, Arabian and Polynesian vessels and seamen were capable of making extensive voyages in the Indian and Pacific oceans and that voyages were made to within approachable distance of Australian waters. Nevertheless, there is no documentary evidence of discovery of the Australian mainland by such vessels.

Weather conditions in North Australia were not generally suitable for Asiatic craft coming from the north. The period of steady sailing wind—the south-east monsoon—occurs between April and September when navigation from the north was not suitable for early sailing vessels, either European or Asiatic. During the period of the north-west monsoon, which is from November to early March, the winds are more variable, with calms

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Angus & Robertson

1958

For Cook's voyages,
see p. 479

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and severe squalls, which, combined with the irregular occurrence of hurricanes and willy-willies from December to early May, made navigation in north Australian waters a risky undertaking for sailing ships, especially native craft; but it was in that period that navigation from the north was possible. Between each period above-mentioned a transitional period occurs when calms and light winds usually predominate.

It is highly probable that Malays reached the north-west coast of Australia before Europeans. Although Flinders was told, in 1802, that fleets of proas from Macassar had been searching for trepang in Australian waters, annually, during only about 80 years, there is no reason why proas from other Malay centres could not have made similar searches during earlier periods. Moreover, anthropologists studying the aborigines of Arnhem Land in recent years have noted definite traces of Malayan influence dating back for many centuries.

There is less substance to the belief that Indians and Arabs penetrated across the Timor Sea or the Arafura Sea, although both Timor and the Arus were known to them. Certainly they supplied the Portuguese with much geographical knowledge, but whether this information included records of Australian voyages is still unknown.

Chinese junks, probably the most seaworthy and highly-developed of the early vessels, were trading in the East even before the Arabian and Indian ships. Especially in the early part of the fifteenth century were the Chinese active in sea-voyages and exploration under the directions of the Chinese eunuch-admiral Chêng Ho: five-pole Foochow junks reached the Red Sea by 1417, and it is possible that such vessels also reached the north-west coast of Australia during that period. Torres found evidence of Chinese presence in western New Guinea, showing that the penetration by Chinese merchants was not far distant from North Australia in 1606.

It appears certain that the western limit of Polynesian expansion from the North Pacific was New Zealand—had the advance extended to the coast of eastern Australia it would surely have resulted in settlement. The Melanesians, less gifted in ocean navigation, did not penetrate beyond the chain of islands extending from New Guinea to New Caledonia, although why the penetration did not extend along the Australian coastline is a question that has caused considerable speculation.

Whatever the nature of Asiatic voyages to the Australian coastline, the fact is that Asia fostered many fabulous stories of rich lands to the south-east. These were current while European travellers were gathering the information that was to become in Europe the spur to geographical expansion. The conception of a Great South Land gathered more and more strength the longer it remained unproved, and this belief was important in the sub-

sequent story of Australian discovery. How the supposition grew is not discussed in this article but it is well summarized in Professor G. A. Wood's book of 1922, *The Discovery of Australia*.

Europeans in the East. In any consideration of the question of discovery of Australia, it is important to remember that both the Portuguese and the Spaniards had clearly before them an objective gained from Arab merchants and early European travellers who had gone as far as Malacca. Both were seeking the Spice Islands—the Moluccas—and by the latter part of the fifteenth century both countries had knowledge of the approximate geographical location of these islands. The Behaim globe (1492), in a long legend, specifies twelve transshipments in the detailed routing of the spices from the islands beyond Java to the consumers in Western Europe. To circumvent the charges of many greedy middlemen and collectors of customs alone promised rich reward to the successful search of an ocean navigational route. The search for spices, therefore, was one of the greatest impelling forces in the age of discovery.

Diogo Lopes de Sequeira's voyage to Malacca in 1509; the capture of the town of Malacca in 1511 by Alonso de Albuquerque, and António de Abreu's voyage to the Spice Islands in 1512 mark the three final successive stages in the fulfilment of their objective by the Portuguese. Once this was gained the Portuguese activities were directed to exploitation of their trading advantages rather than further exploration in southern seas.

As for the Spanish navigators, who had been deflected from their initial goal, firstly, by the accidental discovery of America and, secondly, by that of the Pacific, they did not reach the Spice Islands until Magellan's ships crossed the Pacific and arrived there in 1521; but the return of the famous *Victoria*, under Sebastian del Cano, laden with spices, spurred the Spanish on to greater efforts. The subsequent voyages were important.

A second expedition under Garcia de Loaysa and del Cano left Spain in 1525 to follow Magellan's track to the Moluccas. Both commanders died at sea and only one ship reached the Moluccas, in a pitiable state.

In October 1527 Cortes dispatched three vessels, under the command of his kinsman Alvaro de Saavedra (or Saavedra-Cerón), across the Pacific from New Spain in America, to discover what had happened to the remnant of Magellan's expedition and to establish Spain's claims to the Spice Islands. Two vessels were lost while on passage, but Saavedra, after calling at the Philippines, arrived at the Moluccas, where he found the Spaniards under Hernando de la Torre in warfare with the Portuguese under Dom Jorge de Meneses.

Europeans Find New Guinea. In 1526-7 Meneses discovered a portion of the north coast of western New Guinea, which he called Os Papuas

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and where he spent several months. Little more is known of this discovery of New Guinea, apparently the first by a European.

In June 1528 Saavedra left the Moluccas to return to New Spain. He coasted along a part of the northern coast of New Guinea, beyond where Meneses had explored; but when the ship, after sighting the present Admiralty Islands, reached a point to the north of the present Bismarck Archipelago the full force of the south-east monsoon and the equatorial current drove it north, so causing Saavedra to return to the Moluccas. Another attempt was made by Saavedra to return to America in May 1529, along the same route, but still without success. Saavedra died during this vain attempt to find a return route to America.

Meanwhile the rivalry for the Moluccas caused heated dissension on the Iberian Peninsula. The Treaty of Tordesillas in 1494 (18 years before the Spice Islands were found) fixed a line of demarcation in the Atlantic between the Spanish and Portuguese spheres of influence; later, when it was required, this imaginary line was carried round to the opposite side of the world. It passed very close to the Moluccas, but no one could determine if they were in Spanish or Portuguese territory. By the Treaty of Saragossa, 1529, Charles V of Spain, for a large monetary consideration, pawned his claims to the Moluccas, but not those to the Philippines. The line of demarcation was adjusted accordingly to a position about longitude 154° E. of Greenwich. (In 1938 a noted Portuguese scholar, Amando Cortesão, suggested that this adjustment in the line of demarcation was due to a Portuguese discovery of Australia. He claimed that Christavus de Mendonça left Malacca in 1522 and voyaged south-eastward towards the Australian mainland; but the evidence is slight and the theory has gained no support.)

In 1536 Cortes sent a ship under Hernando de Grijalva to Peru and thence south of the Equator across the Pacific to seek new lands westward. During the voyage the crew mutinied, murdered the commander and then steered for the Moluccas. The vessel foundered shortly after the northern coast of New Guinea was sighted.

In 1542 Don Antonio de Mendoza, the Viceroy of Mexico, sent six ships under Ruy Lopez de Villalobos to make a settlement in the Philippines. The plan failed and de Villalobos moved down to the Moluccas. Fighting with the Portuguese broke out and in May 1545 de Villalobos decided to send dispatches back to Mexico in the *San Juan* under Ynigo Ortiz de Retez—a previous attempt having failed. Ortiz sailed about 550 miles along a coast he called Nueva Guinea, "because the people were black and had friseled hair" and so resembled the natives of Guinea in Africa. Ortiz, like Saavedra, was unfortunate in failing to make headway east of New Guinea against the

south-east monsoon and equatorial current. He charted the coast in some detail and bestowed names which are no longer in existence. Sighting New Guinea at the Cabo de Deseo (near the present Cape of Good Hope) he coasted along until finally at "Ancon de la Navidad de Nuestra Senora" (Inlet of the Nativity of Our Lady) he left the New Guinea coast, but possibly sighted the present Admiralty Islands. The *San Juan* returned to the Moluccas, and the Spaniards gave in to the Portuguese on condition they were permitted to return to Spain.

The next expedition to settle the Philippines was successful. It left in 1564 and with it went the celebrated navigator Andrés de Urdaneta; the Philippines were reached on 13th February 1565. Urdaneta discovered a return route to America through the northern Pacific, so enabling the Spaniards to communicate easily both ways across the Pacific between North America and Asia. With the growth in importance of the Philippines, Spaniards in Mexico lost the incentive to develop their discoveries along the New Guinea coastline. Otherwise, no doubt, they would have found their way to Terra Australis.

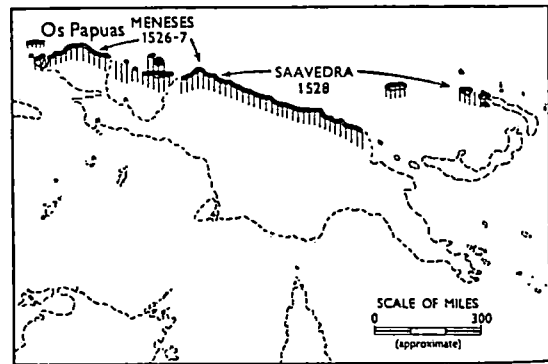


FIG. 1. DISCOVERY OF NEW GUINEA.

Supposed Discovery Before 1600. Why Australia was not discovered by Europeans early in the sixteenth century, as was the case with the northern coast of New Guinea, is a question that has puzzled geographers for at least two hundred years. The problem is still unsolved and it will remain so unless documents—either of Arabian, Portuguese or French origin—that will reveal a voyage not known to history at present are at last brought to light.

The belief in the supposed early discovery has been fostered by the survival of some beautiful examples of French cartography, executed principally at Dieppe between 1536 and 1566. The maps are similar but differ in detail, and each portrays a large land-mass extending southward from Java; considerable research has been made to identify this land-mass with the Australian continent. As no historical evidence is available to prove that a voyage of discovery was made which

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provided the data for these maps, no discussion will be undertaken in the present article, but they are described under MAPS AND MAPPING.

Mention should be made, however, of a supposed voyage, in 1504, by Binot Paulmier de Gonneville, who, in the belief of early French geographers, discovered a South Land in the South Atlantic or southern Indian ocean. The details are so confused that no credence is now given to the claim; but, in the middle of the eighteenth century, that legendary voyage had great influence in encouraging French voyages in sub-Antarctic seas.

From time to time geographers have advanced theories, based on slight evidence, of voyages made by early-sixteenth-century Portuguese navigators to Australia, but subsequent examination generally proved such hypotheses to be false. These rebuffs have not diminished the search for additional evidence to support the claims, and much technical discussion has been published on the subject.

SOUTH PACIFIC SEARCHES

Following Mexico's establishment of a colony in the Philippines, the work of Spanish exploration in the Pacific was taken over by Peru. There were several legends of the Incas telling of rich lands lying to westward of South America, and these tales stirred keen interest in Pedro Sarmiento. He approached the Viceroy who agreed to an expedition and gave the leadership to his youthful nephew, Don Alvaro de Mendaña. The expedition left Callao (Peru) in November 1567.

Solomon Islands Discovered. Mendaña's two vessels steered W.S.W. until they reached latitude 16°S. when they sailed west for about 2000 miles, after which the course was eased towards the north and the latitude gradually reduced to about 8°S. On 9th February 1568 the voyagers sighted an island which they named Santa Ysabel, after the name saint of Mendaña's wife. The mountainous nature of the area led them to believe, at first, that they had discovered a continent; but, after spending six months in the region, their careful exploration (in a small brigantine they had built) revealed a group of islands. However, Columbus had discovered such a group of islands and Mendaña's people believed that a continent lay not far away.

In August the ships sailed north-eastward across the vast Pacific, undergoing intense hardship, to arrive first at California or New Spain, then to return southward to Callao in Peru, where they arrived in September 1569.

Mendaña had made a notable voyage, the first to search towards Terra Australis, but the islands he had discovered did not impress his superiors. The name of Isles of Solomon was given to the group because the geographers imagined that they were the Land of Ophir, the legendary source of King Solomon's wealth.

As matters fell out, the Solomons became "lost" again and were not rediscovered until about 200 years later. Mendaña's pilots had greatly underestimated the distance involved, being unaware of the effect of the equatorial current, which was so strikingly demonstrated in modern times by the Kon-Tiki expedition.

Meanwhile, the belief in Marco Polo's Beach and the fabulous extensive land of Terra Australis was fostered by cartographers. In England, especially, there were influential men thinking and planning a South Pacific voyage of exploration. The news of Mendaña's discovery reached England about 1572; five years later Drake commenced his famous voyage of circumnavigation, which as originally planned might have led to the discovery of Australia. Instead, Drake raided the wealth of Chile and Peru, and made no discoveries other than those on the American seaboard. His example was followed by Cavendish in 1586 and Richard Hawkins in 1593. The objective of the latter was also Terra Australis, but his vessel the *Dainty* was captured off the South American coast. In all probability it was information gained from the captives, to the effect that England was interested in Terra Australis, that caused the new Viceroy of Peru, the Marquis of Cañete, to favour Mendaña's plan for a new western voyage. The expedition, which was financed privately by Mendaña, was ill-found and doomed to failure.

Mendaña's Settlement. At long last, in April 1595, Mendaña left Callao, with a fleet of four ships, to form a settlement in the Solomon Islands as an outpost for further discovery; he was accompanied by his wife Dona Isabel de Barreto, her three brothers, and a company of 378 (sailors, soldiers, and their wives and children). On board as chief pilot was Pedro Fernandez de Quiros (*q.v.*). In July the Marquesas were discovered and named in honour of the Marquesas de Mendoza; here the voyagers anchored and refreshed. On 5th August they sailed westward; on 7th September the ships ran into a thick fog, caused by the volcano of Tinakula in active eruption. During the night the *Santa Isabel*, with Lopez de Vega on board, disappeared, probably destroyed by volcanic shocks. The rest of the ships came to anchor in the Santa Cruz group.

Here, in Graciosa Bay, Mendaña made his settlement, and with ceremony the colony was proclaimed on 21st September. Native hostility, sickness and dissension amongst the colonists broke Mendaña's spirit, and he died on 18th October. His followers continued to die daily until the widow, Dona Isabel, sailed with the remnant on 18th November. Under the guidance of Quiros, a fainthearted search was made for the Solomon Islands, after which the ships made their painful passage to Manila, where two arrived in February 1596; one vessel was lost on passage.

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Quiros Finds "Austrialia". Mendaña's last voyage had a profound effect on Quiros. In the next decade he became obsessed with a crusading zeal to spread Christianity in the South Seas. It was this religious fervour that finally secured him royal approval of a voyage to seek Terra Australis. On 21st December 1605 the expedition departed, with much pomp and religious ceremony, from Callao in Peru. It consisted of two ships and a launch. Quiros's vessel, the *San Pedro y San Pablo* (about 150 tons), had on board the principal officers, three Franciscan friars, and about 60 sailors; the second ship, the *San Pedrico* (about 100 tons), was commanded by Luis Vaez de Torres (q.v.), a Breton, with two officers, three friars, and about 40 sailors; the launch, *Los Tres Reyes*, was commanded by Pedro Bernal Cermeno and carried 12 sailors.

The royal instructions ordered Quiros "to proceed thence to discover New Guinea, Java Major and other southern lands and islands, returning by that part of the world to these my kingdoms of Spain". The voyage, therefore, was to embrace both the South Pacific and Southern Indian oceans.

The plan of the voyage was to sail from Callao on a W.S.W. course until latitude 30°S. was reached. If no land had been discovered, then the ships were to steer W.N.W. until the latitude of Mendaña's Santa Cruz (10° 15'S.) was reached, and the course altered to west. Sailing along that parallel of latitude the ships could not fail to reach Santa Cruz, from where they were to steer S.W. to latitude 20°S. If land had not been discovered by then, the course was to be altered to N.W.; the ships were to sail to latitude 4°S., when they were to steer west along that parallel of latitude to re-discover New Guinea.

Early in April 1606 Quiros sighted Taumako (lat. 10°S.) in the present Duff Group and about 75 miles north-east of Santa Cruz. Instead of adhering to the original plan, Quiros proceeded instead in a southerly direction, sighting islands and increasing his latitude to about 15°S. On 1st May a large land-mass, with high mountains and an expansive bay, was discovered. Quiros thought he had found the South Land, and, in his jubilation, he named it Austrialia del Espiritu Santo, a term given in honour of Philip III of Spain (who was a prince of the House of Austria) and because Quiros imagined the area to be the Great South Land. The large bay he named San Philippe y Santiago (St Philip and St James). The land was, in fact, only an island, the largest in a group which, later, James Cook called New Hebrides.

A settlement was made on the bay and named New Jerusalem. Quiros, obsessed with religion, allowed it to interfere with his weak command of the expedition. As with many another vessel captained by an intensely religious man, the crew was in a state of near-mutiny. This came to a head on

8th June 1606, when the ships weighed anchor to leave the bay. They moved out, but Quiros changed his mind and, several days later, the vessels were ordered back. Torres's ship and the launch succeeded in regaining the anchorage, but the leader's ship failed to do so. Quiros never rejoined the expedition. What happened on board his vessel on 11th June has been reported differently by various members of the expedition. Apparently it was a combination of circumstances that forced him, perhaps against his better intentions, to abandon the other vessels and to sail off back to America.

Here some reference may be made to postulations by Cardinal Moran and Lawrence Hargrave (qq.v.) concerning their respective claims of an alleged landing by Spaniards from Quiros's expedition at Port Curtis, Qld, and of the arrival of the *Santa Isabel* (Lopez de Vega) at Port Jackson, N.S.W. The motive behind the former claim was the desire to establish that Roman Catholicism was practised before other denominations gained a place in Australia. These theories that the Australian eastern coastline was discovered by early Spanish explorers have no basis of fact. Nevertheless, various legends in print, and especially one about a supposed Spanish wreck on Facing Island, Port Curtis, are periodically brought forward.

TORRES IN TORRES STRAIT

After Quiros had separated from his consort, Torres waited for his return in the Bay of St Philip and St James, Espiritu Santo Isle, until 27th June 1606; then he departed. His ship *San Pedrico*, accompanied by the launch *Los Tres Reyes*, sailed far enough round Quiros's "Austrialia del Espiritu Santo" to obtain proof that it was merely an island; then, with the south-east monsoon on the port beam, they set off in a south-westerly direction to seek the Great South Land.

At a position close to the present Frederick Reef (about 120 miles from the Great Barrier Reef), in latitude 21°S., longitude 155°E., Torres gave up the search and altered his course to a northerly direction to proceed to the Philippines. On 14th July, at dawn, he sighted land. This was Tagula Island and it was only a few miles away; so close inshore were the vessels that the south-east wind prevented them from weathering the eastern extremity of the reef. It was a moment in which a quick decision had to be made, and, after a brief attempt to sail east, Torres altered his course to westward. There was little else he could do, but the decision meant the beginning of his epic voyage along the south coast of New Guinea.

During succeeding weeks he tried on many occasions to escape from the coast, endeavouring to penetrate through the gaps in the land and so continue in a northerly direction towards Manila; but nowhere could he find a practicable opening,

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and thus his vessels were forced to follow the coastal and offshore reefs towards the west.

Before giving a summary of the route taken by Torres, it should be stated that the matter has been subject to much controversy. There is documentary evidence available, but some of it is ambiguous, which factor, combined with obvious clerical errors, has led to misinterpretation. It is necessary to bear in mind, when studying the evidence, that Torres was making every effort to escape north. The present article does not enter into a full discussion of this controversy, but the track given satisfies most of the evidence available.

The evidence for the voyage consists of a letter, dated 12th July 1607, from Torres to the King of Spain, together with several letters, four plans of anchorage, and a "relaçion" by an officer named Diego de Prado, who accompanied the expedition. Unfortunately, a general map of the voyage, drawn by Prado, once known to exist, has been lost. Prado's "relaçion", although the fullest account of the voyage, was not written at the time of the voyage, and it contains many inaccuracies and much self-aggrandisement. He claimed, for example, that he was in command after the separation from de Quiros, but this is quite unsubstantiated. Moreover, Prado was most careless in matters of measurement—in recording distances, bearings and altitude or latitudes. In his descriptive matter he is more reliable.

For four or five days after sighting Tagula Island the ships coasted slowly westward outside the reef, until they saw an opening and were able to approach some islands. They came to anchor in the present Sukuri Bay in Sideia Island. The harbour they named San Francisco, and Prado made a careful map on which the topography can be clearly identified.

Here they spent about three weeks, refreshing themselves by robbing the natives of provisions, and carefully exploring the bays beyond the narrow opening—the present Rocky Pass to Jenkins Bay and Milne Bay. But Torres could find no passage north, so the vessels moved on westward to the present Orangerie Bay.

In this vicinity they spent the period from St Clara's day (12th August) until St Bartholomew's (24th August). Again the topography on Prado's map can be clearly identified; St Clara's Island is Mugula and Prado's San Bartolome is Toulon on the modern chart. Again, here, the natives were assaulted and robbed of provisions and some of them, including women, were taken to Manila.

Several days later the voyagers coasted on westward, sometimes within the offshore reef, as far as Hood Bay, where the coastline alters its direction to the north-west and where more rapid progress was made before the south-east monsoon to an island called San Juan Bautista (29th August). This island is not easily identified;

indeed from this point Prado's narrative is difficult to follow and Torres's track henceforth cannot be plotted with certainty. From the weight of evidence, however, it is known that Torres penetrated farther into the Gulf of Papua, but then, becoming alarmed by the breaking seas on the continuous bars at the river-mouths in the vicinity of Cape Blackwood, he altered his course south-westward, and thereby lost sight of the coast. These breaking seas on the shoal areas in this part of the gulf, so dangerous in the south-east monsoon, kept Torres moving south-westward, and though in shallow water he would have to proceed under full sail to avoid getting on a lee shore.

At this point, of course, Torres was navigating in completely unknown and dangerous, shallow, reef-infested waters. His limit of visibility would be no more than 10 miles, unless high land appeared over the horizon and haze was not present to prevent him from seeing it at a greater distance. There were no charts or pilots to tell him where to go, and except for what he could see within that small circle of visibility, and the knowledge that the mainland might exist to the northward, he was navigating completely in the dark. His rate of progress was slow; in the open ocean it might be as much as 100 miles per day, but more often it was only 75 miles. Along a new coast the distance made good would not be more than 30 miles in a day, unless the circumstances were exceptional; but in reef-infested waters, such as he was about to enter, the rate of progress would be reduced to 10 to 15 miles in the day and not always then directly towards the objective. On top of that the south-east monsoon and the strong tidal currents controlled his movements and prevented him from going back in his tracks.

Torres wrote that during this period his ships were continuously in shallow water—never more than nine fathoms. This statement means that they navigated in the region to northward and westward of the present Warrior Reefs.

Unfortunately, when attempting to plot a track through this region an investigator is confronted with a totally unsurveyed part of Torres Strait—almost 10,000 square miles of sea in which it is known there are extensive reefs with navigable channels between them. Here too are many uncharted sand-cays, some large and covered with vegetation, which from a small vessel would appear to be islands. Pending the covering of this region by a survey there are not sufficient records to plot Torres's track, so that what is now described can be accepted only as a reasonable interpretation of the scanty evidence available.

After sailing on the south-west course for two days Torres sighted land, an island he called Malandança (ill-going) and which was the present Bobo or Bristow Island. That evening (6th September) the voyagers anchored nearer the main-

land (which they could now see) at the Isla de los Perros (Isle of Dogs), which was the Daru of today. Here they found refreshment and women, three of the youngest of whom they took on board "for the service of the crew". On the 8th they proceeded, "with hard work", through the narrow channels, along the mainland to the present Saibai Island and then on to Dauan Island, which Prado states was lofty. It is, in fact, the only lofty island (795 feet) near that part of the New Guinea coast.

The anxiety with which this island was climbed, and the consternation at what was seen, can be imagined. Prado states they saw 40 islets situated among the shoals, and this statement identifies the lofty island as the present Dauan. What Torres could see from the summit of Dauan would force him to proceed in a south-westerly direction. Thus they arrived at the present Turnagain Island, where occurred an eclipse of the moon (15th September) and where they were nearly overwhelmed by a fierce storm.

At Turnagain Island Torres found himself embayed among extensive reefs. Prado wrote: "We tried again to go to the great land [the mainland of New Guinea], but the shoals were so large that we could not get across." This statement establishes the fact that the *San Pedrico* anchored at Turnagain Island. From this island three summits of land could be seen—to the north-east was Dauan whence they had come; to the south-east was the present Gabba or Brothers Island, while in the south-south-west was the present Mobyag or Jervis Island. Torres would endeavour to reach one of these islands; he would have no wish to return to Dauan, and to reach Gabba would be difficult, if not impossible. He would therefore try to reach Mobyag, a not-impossible undertaking if no reefs intervened.

Reefs, however, do lie between Turnagain and Jervis islands, known today as Orman Reef. They are still unsurveyed. The problem of crossing these reefs was solved by deciding to weigh anchor at low water, to go under foresail only, with the flow of the tide, and to anchor at the top of the flood. Prado wrote: "The opinion was as if it had come from heaven, for in this way we secured the ships and our lives." From a close study of the configuration of that particular region and the movement of the tides, it was quite possible for the shallow-draught *San Pedrico* to reach the present Mua or Banks Island, which as the vessel moved south would have become more and more prominent, and thus be their objective.

The passage, however, was difficult; after three days within the reefs they reached a flat island, probably (for reasons already explained) an uncharted scrub-clad sand-cay. From here they struggled on to reach the present Mua, or Banks Island, which Prado stated was the largest island (as it is), and "greatly resembled the hill of Our

Lady of Monserrate". He added that the natives fled to the hills, to escape from the Spaniards. This statement, in addition to the appearance of the island, confirms that Banks Island was Prado's Monserrate, since it is the only island in this area which has large hills where the natives could hide.

Banks Island has several summits, from where other islands and reefs in the south could be seen. The northern tip of Australia could also be seen from a summit of Banks Island if the weather was clear, but it would only have the appearance of an island. Torres wrote that there seemed to be other large islands in the south, and it is obvious from this statement that the summit of Banks Island was climbed by a party of Spaniards in 1606.

From the summit of Banks Island, the Spaniards would have guessed that the seas to the north-westward were navigable; but before the voyage was continued Torres would have required both provisions and water. Unfortunately, Prado did not make a map of the islands in the vicinity of Banks, which would have indicated the route taken by the ships and where they were anchored while the voyagers obtained water. Evidence points to that position being in the present Banks Channel, near the anchorage at Rugged Point, Mulgrave Island. Here they waited eight days because the currents were too violent for a safe passage.

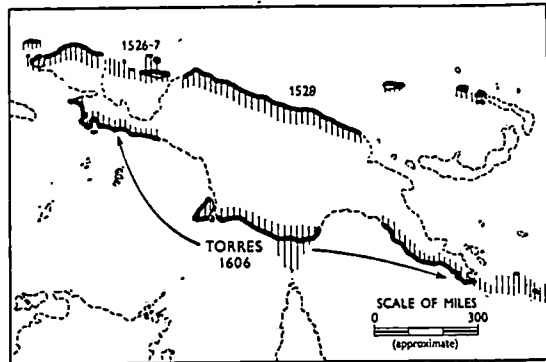


FIG. 2. TORRES IN TORRES STRAIT

Eventually, when currents were suitable, the ships weighed anchor, got through the reefs, and with a strong breeze and better water sailed northward. Five days later, while still coasting, they came to the prominence known today as False Cape; there Torres wrote, "The coast runs along to the north-east." Torres and Prado knew then that their "coasting" was ended.

How far south did Torres go? Various factors suggest that he proceeded along the southern coast of Banks Island, where there were many villages. Whether he went as far south as Hammond Island cannot be established on the evidence available, but it is improbable. To gain a supply of water would be important (even if the distilling on board supplied a little), and where that was obtained in the dry season would be a factor in

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establishing where they went. The channel Torres passed through and his farthest point south, therefore, is likely to be either the present Banks Channel (the more probable) or Bramble Channel in latitude about 10° 20'S.

Seven days after finding False Cape the Spaniards sighted New Guinea again, and, coasting it westward, they anchored in the present Triton Bay. From here the voyage was continued to the Moluccas (where the launch was left), thence to Manila, where they arrived in May 1607.

DUTCH DISCOVERIES

It was also in the first decade of the seventeenth century that the first definite white contact with Australia was made. This honour was taken, not by Portuguese or Spaniards, but by Dutchmen. It was at almost the same time as Torres discovered the strait bearing his name that Dutchmen from Java sailed along the southern side of New Guinea.

The "Duyfken's" Voyage. For many years the references to this voyage were secondary, and for that reason it was doubted by some geographers that the Australian mainland had been seen by the Dutch in 1606.

Captain John Saris, an agent of the English East India Company, while living at Bantam in Java during 1605-9, noted in his journal (November 1605) the departure of a "Flemming's Pinasse" towards New Guinea, and the return of the same vessel to Banda before June 1606. This reference, together with the mention of the voyage in the instructions issued by the Dutch authorities to both Carstensen and Tasman, with comments in the former's journal relating to the *Duyfken*, were for many years the only proof that this voyage had been made. However, Dr F. C. Wieder published in his *Monumenta Cartographica* (1923-33) a chart of the *Duyfken's* voyage, thus providing proof of the discovery of the Australian mainland in the early months (probably March) of 1606. Unfortunately, the journal of the voyage is still missing and a definite date cannot be attached to this discovery.

Under the command of Skipper Willem Jansz (*q.v.*) and Subcargo Jan Lodewijs van Roossengin, the *Duyfken* (Little Dove) left Bantam on 18th November (old style), proceeded to Banda, and after calling at the Kei and Aru Islands sailed eastward to the New Guinea coast, thence coasting it southward to False Cape. The track is clearly shown on the original chart. From False Cape the *Duyfken* proceeded in a south-easterly direction, sighting the present Cape York Peninsula in the vicinity of Pennefather River (or Coen River on the Admiralty chart).

Turning south, the vessel anchored, apparently, in the present Albatross Bay (Duyfken Point anchorage); then, continuing their course, the voyagers discovered and named several inlets. The

coast hereabouts is very barren and, probably being unable to find water (and possibly because the south-east monsoon had started), Jansz began to retrace his course at the point he named Cabo Keer-weer (Cape Turnagain). On his northward course beyond where he first sighted land he found an extensive inlet and river. Here, probably, the *Duyfken* anchored and watered. Certainly a boat was sent up the river (now the Wenlock River) and contact was made with aborigines, the result being a serious clash in which a Dutchman was killed.

The northward course was resumed and, as indicated on the chart, Jansz clearly saw and noted down carefully the various islands, reef-openings and the northern extensive coral reef, along the western edge of what is now known as Torres Strait. The prevailing wind and strong tidal streams setting west would make it impossible for Jansz to penetrate the area on an eastward course.

On the chart, the region that lies to the eastward of the islands indicated thereon is left blank, signifying that Jansz was uncertain if land existed there. Judging from the chart, the voyage was carefully executed; it is most regrettable, therefore, that the journal of this notable voyage in Australian history has since been lost.

From this strait the *Duyfken* made a course westward. The New Guinea coast was not followed, probably because Jansz was anxious to get sea-room with the south-east monsoon in order to weather False Cape. Once this point was passed, the coast was followed again for a short distance, when the *Duyfken* again altered course northward to proceed to Os Papuas, thence to Banda; there she arrived no later than the middle of May 1606. The report on the new land would not be encouraging; in fact, Saris noted briefly that they found "no good to be done there".

On the chart, too, there were still many regions on the New Guinea coastline left blank, where a possible strait might exist. This applied especially to that gap directly eastward of False Cape, for it was here that the Dutch believed Torres came through, when information concerning that voyage reached them.

Le Maire's and Schouten's Voyage. A Pacific voyage of some importance in the early search for Terra Australis was that of two Dutch navigators, Willem Corneliszoon Schouten and Jacob Le Maire; they left the Texel in June 1615 and discovered and named Cape Horn, South America, on 29th January 1616. Thence they navigated across the southern Pacific Ocean, but no major discoveries were made. In June (1616) the northern coast of the present New Ireland was sighted; this they believed to be part of New Guinea. During July and August the Dutch ship, the *Eendracht*, slowly sailed along the northern coast of New Guinea, and some of the nomenclature given by the Dutchmen still survives on the chart today.



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West Coast Contacts, 1616-22. At first the Dutch used the old Portuguese seaway to India, either along the African coast through the Mozambique Channel or along the eastern coast of Madagascar, thence to the Maldive Islands. About 1611, certain of the Dutch ships while on passage to Java proceeded directly eastward after leaving the Cape of Good Hope, but when near the longitude of their destination they proceeded in a northerly course. This new route had advantageous winds and currents, and it was so much quicker that a commander of one of the ships, Hendrik Brouwer, wrote to Holland about it in highly laudatory terms. By 1613, the Dutch East India Company was recommending this route to commanders and skippers sailing for the Indies.

Accordingly, with Dutch enterprise in discovering the new southern route across the Indian Ocean lies the credit for the eventual discovery of the western, northern and southern coasts of Australia west of longitude 133°E. The fact that the Portuguese had not changed their initial seaway to India over a century, and had made it a regular itinerary by the building of a chain of fortified ports, prevented any possibility of their discovering Australia from the westward.

As soon as the Dutch had commenced using the new southern route, it could be only a matter of a few years before the Australian continent was found, either by a ship's sighting it in daylight or being wrecked upon the inhospitable shores at night. The story of Dutch discovery during the seventeenth century will be told briefly in chronological order. In this period, also, there were several English ships off the western coast of Australia, and these are mentioned later.

1616. The *Eendracht* (or *Eendragt*), with Skipper Dirck Hartog (or Hartoochs) and Supercargo Gilles Miebais, came in sight of a new land in October, and the coast was examined between latitudes 26° and 22°S. The coast was named Landt van d'Eendracht. At a point now called Cape Inscription, on Dirk Hartog Island, they set up a post, with a common pewter plate on which was inscribed a record of their visit. (See HARTOG, DIRCK; VLAMINGH PLATE.) Contemporary maps marked this point Dirck Hartog's Ree (roadstead); it is, in fact, a good anchorage. The news of the discovery reached Holland in 1618, and ships were cautioned to look out for what it was hoped would prove to be Marco Polo's Beach, with its supposed great wealth of gold and spices.

1618. On 11th May the *Zeewolf*, Skipper Hae-vik Claeszoon Van Hillegom, Supercargo Dirks-zoon, came in sight of the western coast in latitude 21° 15'S. As the news of the *Eendracht's* discovery had not reached Holland before the *Zeewolf* sailed, the land was equally unexpected.

During July the *Mauritius*, Skipper L. Jacobsz, Supercargo Willem Jansz, overran its proper

course and came in sight of land in latitude 21° 45'S.; on 31st July the voyagers landed on an "island" whose northern point was in latitude 22°S. This was the peninsula on the western side of Exmouth Gulf, and shown on later charts as Cloates Island. They discovered an inlet which they named Willem's Rivier, after the supercargo, who was the same Jansz who had been skipper of the *Duyfken* in 1606. The identity of this inlet is doubtful, but it may have been the entrance to Exmouth Gulf or one of the reef anchorages on the coast south of the present Point Cloates.

1619. On 19th July the ships *Dordrecht* and *Amsterdam*, Commander Frederik de Houtman, Supercargo Jacob d'Edel, came in sight of the western coast in latitude 32° 20'S. The ships anchored apparently near the present Bunbury, but a gale and heavy surf prevented a landing. After losing an anchor each, both ships proceeded to sea to keep their offing until weather abated, but as this had not happened by the 28th they proceeded northward, sighting a "cape" which was the present Rottnest Island. Two days later, three hours before daybreak, while considering themselves at sea clear of danger, they unexpectedly came on the reefs and islands now known as Houtman Rocks or Houtman Abrolhos (*q.v.*). Houtman wrote in his report to the managers of the Dutch East India Company that the shoals, fully 40 miles in length, were very dangerous. No high land or mainland could be seen, and so he advised that ships in future, after running their easting down, should approach the South Land north of this dangerous area in latitude 26° or 27°S. This shoal, which a hydrographer today would call "Houtman's Surprise", was named Houtman's Abrolhos (a Portuguese term from *abre olhos*, literally "eye-opener"). Who named the shoal and why a Portuguese term was adopted is not known, but it first appeared on an early chart by Hessel Gerritsz, dated 1622. The presence of this name on the chart is not due to any earlier discovery by the Portuguese, as some historians of the older school have claimed. That portion of the mainland sighted by the ships in the vicinity of Perth was named d'Edel's Landt, after the supercargo.

1622. On Gerritsz's chart of 1627 appears a note stating that "'t Landt van de Leeuwin" was discovered in March 1622. A ship of that name voyaged to the Indies at the time, and presumably sighted the coast near Cape Leeuwin. No journal exists to support the discovery noted by Gerritsz.

The Dutch ship *Wapen Van Hoorn* was almost wrecked on Eendracht's Land in June 1622.

Carstensz in the North. At the beginning of 1623 the Dutch East India Company dispatched two yachts to conclude treaties with the natives of Kei, Aru and Tenimber Islands. At the same time the opportunity was taken to make a voyage of exploration to the south of New Guinea.

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Information about Torres's voyage was known to the Dutch, as shown by a note on Gerritsz's map of the Pacific dated 1622, which in substance stated that the land discovered by the *Duyfken* must be separate from New Guinea because of this Spanish voyage. To investigate the problem of this strait the Dutch authorities in Java sent the yachts *Pera*, Skipper Jan Carstensz, and *Arnhem* (or *Aernem*), Skipper Dirck Meliszoon (firstly), Skipper Willem van Coolsteerdt (secondly). Carstensz's journal has been preserved, and from this, in conjunction with several charts of the voyage, the ships' tracks can be followed with accuracy.

The *Duyfken* had left unexamined four areas where a strait might exist; one to the north of False Cape, one to the east of False Cape and one either above or below the land discovered between 10° and 14°S. From 6th February 1623 until the end of March the ships closely followed the New Guinea coastline from almost north of the Aru Islands to False Cape and thence eastward to Torres Strait. The vessels anchored frequently and many landings were made. On one occasion nine men, including Skipper Meliszoon, from the *Arnhem*, were killed in a fight with Papuans. In place of the gaps shown on the *Duyfken*'s chart, Carstensz found the land to be "an unbroken coast".

Near Torres Strait the ships encountered an extensive and dangerous coral reef and were nearly trapped, but, fortunately, they escaped disaster by getting sea-room. Carstensz named the region Drooge Bocht (Shoal Bay).

On 12th April the voyagers sighted Cape York Peninsula in latitude 11° 45'S. They then proceeded south along the coast, for 14 days, until latitude about 17°S. was reached. On passage they anchored in several bays and inlets, landed at times, and fought several skirmishes with aborigines, one of whom they captured later and took back to Batavia. At the end of the southern journey Carstensz anchored in a swamp-lined estuary of a large river, which he named Staten Rivier.

Here the difficulties of proceeding against the south-east monsoon and the fear that northerly winds might soon set in caused Carstensz to retrace his course northward to investigate the last opening where a strait might exist. At this point he was separated from the *Arnhem*; Carstensz said the other vessel deserted him, but that might not be the true reason. On the *Arnhem*'s chart there is an indication that the ship proceeded a little farther south, and its company saw that the foot of the coast was reached and that it trended west.

The *Arnhem* when separated from the *Pera* proceeded to return direct to the Aru Islands before the wind, and it took a course which resulted in the discovery of part of Northern Territory, now called Arnhem Land. The coast was sighted near Cape Grey, Caledon Bay. The vessel probably an-

chored under the lee of the present English Company's Islands while her boat investigated the openings in the chain now called the Wessel Islands. (The *Arnhem*'s officers called them Speult Islands, in honour of the Governor of Amboina.) After passing through one of the openings, the vessel eventually arrived at Banda on 14th May.

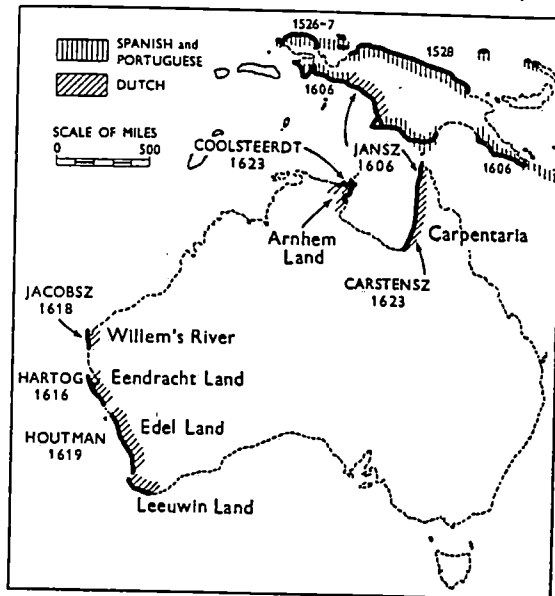


FIG. 3. EARLY DUTCH DISCOVERIES

Meanwhile, Carstensz kept steadily along the coast of the present Cape York Peninsula, charting and trying to contact the natives by making repeated landings, without much success and with increasing disgust at the barren nature of the country. A typical entry in his journal reads: "We have not seen one fruit-bearing tree, nor anything that man could make use of; there are no mountains or even hills . . . this is the most arid and barren region that could be found anywhere on the earth; the inhabitants, too, are the most wretched and poorest creatures that I have seen."

At last he anchored in the western entrance of the present Endeavour Strait, but to westward of the shoals that exist there. Although Carstensz landed, there was little to indicate that a channel existed, and with the strong south-east monsoon that had set in by then he could not make his way eastward, even if he had so desired. Accordingly, on 15th May he left the coast and proceeded to the Arus, thence to Amboina, where he arrived on 8th June after successfully completing a most thorough and distinguished voyage. The land discovered by Carstensz was called Carpentaria, after Pieter de Carpentier, Governor-General of the Dutch East Indies.

Other Contacts, 1624-36. Additional contacts with the west coast, on the part of Dutch vessels, occurred during 1624-7. The most important of

these was that of the ship *Gulden Zeepaard* (Golden Seahorse), Skipper Francois Thijssen, and with Pieter Nuijts, member of the Council of India, on board. This vessel sighted the South Land on 26th January 1627 and sailed along the southern coast for about 1000 miles between Cape Leeuwin and a group of islands now known as Nuyts Archipelago. The two largest islands in the group were given saint-names after the Christian names of the two principals on board—St Peter and St Francois. It is probable that the ship ran her easting down in a higher latitude than usual, and sighted land first in the vicinity of Nuyts Archipelago. The coastal discovery, therefore, was made on a western course.

In 1628 the ship *Vyanen*, commanded by Gerrit Frederikszoen de Witt, unexpectedly came in sight of the South Land in latitude 21°S., and sailed along it for about 200 miles. The discovery received the name of De Witt's Landt.

A year later the ship *Batavia*, commanded by Francois Pelsaert, was wrecked on Houtman Abrolhos; it ran on to one of the reefs (probably the present Noon Reef), on the night of 4th June 1629. An account of this wreck, which was followed by the greatest series of mass murders in Australian history, is given under BATAVIA, WRECK OF THE. Pelsaert, in the rescue vessel *Sardam*, subsequently made surveys in the vicinity of the wreck.

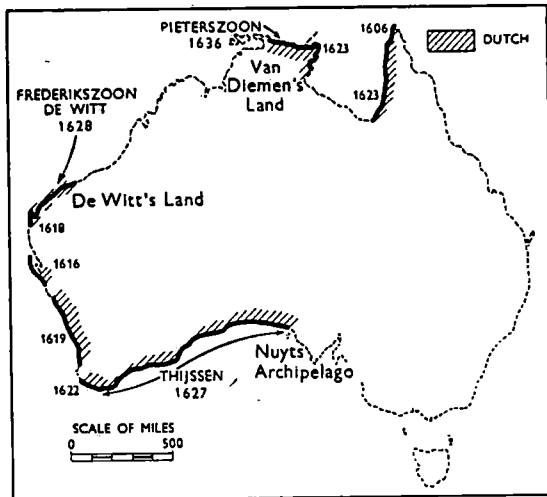


FIG. 4. DUTCH CONTACTS, 1627-38

In 1636 the scene changed again to the Gulf of Carpentaria. The yachts *Klen-Amsterdam* and *Wesel*, Commander Gerrit Thomaszoen Pool and Supercargo Pieter Pieterszoen, were sent to make investigations between the discoveries of the *Pera* and *Arnhem* and those on the western coast; they were instructed to leave Amboina in April to proceed to New Guinea, then to Arnhem Land, then to eastward. While the vessels were still in New Guinea four members of the company, including Commander Pool, were killed by natives; but

Pieterszoen continued with the voyage, leaving the New Guinea coast on 9th June. The south-east monsoon prevented the ships from getting to eastward of Speult Islands—which were re-named Wessel Islands—and they were forced to turn westward along the coast of the Northern Territory. This coast they left in the vicinity of the present Croker Island and the ships returned to Banda. The area they discovered, about 80 miles of coastline, was named Van Diemen's Landt, after the Governor-General of the East Indies. Although that name never came into general use for that region, the name Van Diemen Gulf commemorates the voyage.

Tasman's First Voyage. After peace was signed between Holland and Portugal, in 1641, Prince Maurice of Nassau conceived a Dutch conquest of Chile and Peru, the coast then being in revolt against Spain. By such a victory, he hoped to bring together the interests of the Dutch East India Company and the Dutch West Indies Company.

The Dutch West Indies Company (formed in 1623) set out to implement this proposal, and in Batavia Governor-General Van Diemen also took action—he instructed a skilled pilot-major, Francois Jacobszoen Visscher, to devise a plan for two ships to penetrate into the South Seas beneath the recently-discovered South Land, and it was largely Visscher's geographical ideas that formed the basis of the well-conceived voyage that followed, as an initial step towards establishing a route to Chile. So great was the rivalry between the companies that each hoped to forestall the other in achieving this proposed conquest.

Thus in August 1642 instructions were issued for a voyage by the yacht *Heemskerck* and the flute *Zeehaen* (Sea-Cock), commanded by Commander Abel Janszoen Tasman (*q.v.*) with Visscher as pilot-major and Ide Tjerkksen Holman and Gerrit Janszoen as skippers. Tasman was instructed to go to Mauritius, where he could refresh his crews and stock and repair his ships for the voyage; then he was to steer south to latitude 54° (the latitude of Cape Horn) and follow one of two routes.

The first possibility was to sail due east until the supposed longitude of the "Salomonis Eylanden" (of Mendana) had been reached, and if no land had been sighted to steer a further few hundred leagues east, then to steer north to the Solomons, which "lie spread over so vast an area" so they could hardly be missed, and where there was no "doubt that divers strange things will be revealed". Thence they were to steer for the east coast of New Guinea, to sail along its northern coast, to search for passages through to the southern shore of New Guinea, and then to search further for passages between New Guinea, Arnhem Land and Eendracht's Land.

The second alternative route required Tasman to run his easting down only as far as the longitude

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of Nuyts Archipelago, then to steer north to that coast and to follow it eastward. The first route was that recommended by the council, principally because of their desire to establish a lucrative advance base in the Solomon Islands. A determination to reach that destination, and so obey his superiors, caused Tasman to carry on without deviation. He succeeded in fulfilling his instructions as far as his abilities allowed him, for he was a fine navigator and a good commander and leader; but, luckily for the Englishmen who came later, he lacked the curiosity and initiative that are essential in an able explorer.

The vessels left Mauritius on 8th October (1642) and sailed southward to reach their high latitude, but the roaring forties' weather prevented them from going beyond 49° 04'S., and conditions were so uncomfortable that Tasman gradually reduced his latitude to about 42° S. On 24th November the *Zeehaen* made a landfall near the present Cape Sorell on the western coast of Tasmania, which Tasman then named Anthony Van Diemen's Landt. Altering course southward the ships rounded the present South-west Cape, where they had a northerly wind that permitted them to sail along the south coast. Tasman named the outlying islands after members of the Council of India—De Witt, Sweers and Maatsuyker—and to a black basaltic island covered with white guano he gave the name Pedra Branca, after a similar rock on the coast of China, so named by the Portuguese long before.

Turning north into Storm Bay, the voyagers encountered a violent north-west gale which blew them out to sea again. On 1st December they rounded the present Cape Pillar (which Tasman called De Zuyd Cap) and the neighbouring island, Tasman's Eylandt; soon afterwards they anchored either in the present North Bay near Green Island or in Marion Bay. Next day the pilot-major was sent with a boat's crew to explore Frederick Henrick Bay (the present Blackman Bay), where they landed, explored the country, and heard aborigines.

On 3rd December Tasman took formal possession of Van Diemen's Land for Holland. A high sea prevented a boat's party from landing, but the master carpenter, Pieter Jacobszoon, swam ashore to set up the company's mark and the national flag. On the following day the ships weighed anchor and proceeded along the coast northward, but then the wind caused them to leave the coast and so they resumed their course eastward, according to instructions.

On 13th December the voyagers sighted the south island of New Zealand, which they named Staten Landt, "in honour of Their High Mightinesses the States General". Coasting northward, Tasman entered the present Golden Bay, where he anchored. Here the Maoris in their war canoes attacked the *Zeehaen's* cock-boat, which had imprudently ventured near them, and three seamen

were killed and a fourth mortally wounded. Tasman accordingly named it Moordenaers (Murderers') Bay.

As they moved north along the western coast several names were bestowed by them, including t'Eylandt Drie Coninghen (Three Kings' Island) and Cabo Marija Van Diemens, after the wife of the governor-general; but no landing was made in New Zealand, partly owing to the bad weather, partly because of the lack of suitable landing-places on the western coast, and partly because Tasman pressed on to carry out his instructions to reach the Solomon Islands, instead of following the coastline which he had just discovered.

The ships left "Staten Landt" on 5th January 1643, reached the island of Amsterdam (Tongatabu) on the 20th, and then proceeded to Rotterdam Island (Anamooka). Sailing on 1st February, they soon found themselves among the north-east outliers of the Fiji Group, which Tasman called the Prins Willem Eylanden. From then on the weather conditions were not good and Tasman, after continuing his search for the Solomon Islands, sailed via Ontong Java (north of the Solomon Islands), and the north coasts of New Ireland and New Guinea, thence to Java, where he arrived in June 1643, after an absence of 10 months.

By this voyage Tasman had shown that there was a route into the Pacific south of the South Land, but, apart from this geographical discovery (which Van Diemen did not accept definitely as a proven course to Peru and Chile), there was the consideration that the Solomon Islands had not been found, and thus there was no result of immediate importance offering possibilities for establishing a lucrative trading base en route to Chile.

Tasman's Second Voyage. On 13th January 1644 the yachts *Limmen* (Lime) and *Zeemeeuw* (Seamew) with the flute *Bracq*, in charge of Commander Tasman, Pilot-Major Visscher, and Skipper Dirk Corneliszoon Haen and Jasper Janszoon Koos, were sent on another expedition to the South Land. Of this voyage only rudimentary details are known, as Tasman's journal has not survived; but Van Diemen's instructions to Tasman are extant and provide important information.

With the failure to find the Solomon Islands, the route discovered by Tasman on his first voyage appears to have been considered too lengthy for practical purposes, for, instead of providing ships for a further investigation in those regions, Van Diemen instructed the expedition to proceed to the northern coast of the South Land; the expectation was that a passage into the Pacific might be found, thus providing a shorter route for raiding the Spanish possessions along the western seaboard of South America.

Accordingly, Van Diemen ordered Tasman to leave Banda on the last day of February, coast New Guinea to the Drooge Bocht, examine that

area for a passage into the Pacific (Torres's voyage had not been forgotten), and, if that investigation failed, to follow the *Pera's* course south in order to investigate the possibility of a passage between the coast of Carpentaria and the newly-discovered Van Diemen's Land in the south. If that expectation proved fruitless, the ships were to follow the coast west to Eendracht's Land, to determine if there was a passage south of Arnhem Land, which was suspected to be an island.

Of the actual voyage, only a chart with a track-line is the source of modern knowledge of Tasman's great achievement, in which he proved that the South Land was an unbroken coast between Torres Strait and North-west Cape.

Tasman was a cautious navigator. Although not lacking courage, he did not wish to enter shoal areas, and thus he was unable to penetrate into Torres Strait, which in any case is a difficult region for a sailing ship to enter from the westward, even with modern charts. His chart of the rest of the coast, moreover, shows that he sailed a good distance from the land, so that outlying islands are sometimes shown as peninsulas, and hills on the mainland are depicted as islands. But, in spite of this defect, his running survey of the coast achieved many discoveries, including the southern and western shores of the Gulf of Carpentaria, Groote Eylandt, and the coast between Van Diemen's Land in the north and De Witt's Land in the west.

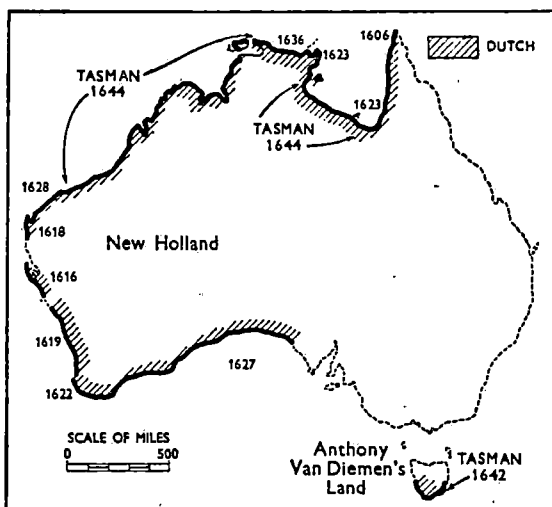


FIG. 5. TASMAN'S EXPLORATIONS, 1642-4

Tasman discovered a more extensive length of Australian coastline than any other navigator, although Cook's greater discovery almost equals his in direct linear distance. The chart of this second voyage by Tasman shows that the vessels anchored on many occasions, but no details are known of landings and exploration ashore, although considerable nomenclature has been attached to geographical features, especially in the Gulf of Carpentaria.

The results of the voyage were a disappointment to Van Diemen, but it was no fault of Tasman's that the South Land was found to be an unbroken coast with no openings or passages permitting a practical route for sailing ships into the Pacific from the Arafura and Timor seas. This solid land was named on a chart showing the results of this voyage, "Compagnis Nieu Nederland", and shortly afterwards the name New Holland was generally adopted. (See AUSTRALIA.)

Meanwhile, on the west coast of South America an expedition under the command of Hendrik Brouwer had also been unsuccessful. It had proved "Staten Landt" in that region to be only a small island; it had experienced disastrous weather and one ship had foundered. After many disappointments, Brouwer finally died off the coast of Chile, and the expedition returned to Holland. Thus both companies failed to implement Prince Maurice's plans of conquest in Chile and Peru.

Dutch Interest Weakens. By this time Dutch authorities had begun to lose much of their interest in New Holland. In 1647 the charter of the Dutch West Indies Company was renewed for another 25 years, and as the western shores of North and South America, with "the gold-bearing mines of Chili and Peru", were still strictly within the limits of that company's charter, there was now no incentive for the organization in the East Indies to carry on exploration into the south Pacific. Moreover, Van Diemen had died in 1645, and as each of the earlier voyages had failed to produce evidence that trading possibilities existed in the South Land the Dutch had no further desire to continue exploration in that region.

Subsequent voyages, therefore, were made principally for the specific purposes of surveying for charting purposes or searching for shipwrecks and survivors. In following years many vessels, both Dutch and English, sighted New Holland when outward bound to the Indies. No mention will be made of those contacts, except for the case of one shipwreck.

On 28th April 1656 the ship *Gulden Draak* (Golden Dragon) was wrecked in latitude 30° 40'S., about 100 miles north of the present city of Perth. No fewer than 118 lives were lost by drowning; seven survivors made their way to Batavia in a cock-boat, but 69 others, who had reached the shore of the mainland, were never heard of again. Subsequently a number of vessels were sent to search for survivors from the wreck. These ships carried out careful explorations; on the charts prepared by Skipper Volckersen of *De Waeckende Boeij*, and in his journal, Rottneest Island and the anchorage behind are clearly described. He did not name the island.

Vlamingh's Voyage. In 1696 the managers of the Dutch East India Company dispatched from Holland via the Cape of Good Hope a flotilla to

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New Holland to inquire into the fate of the ship *De Ridderschap van Holland*, which was lost two years earlier. The flotilla consisted of the *Geelvink*, Skipper-Commander Willem de Vlamingh; the *Nijptang*, Skipper Gerrit Collaert; and *Het Weseltje*, Skipper Cornelis de Vlamingh.

The voyagers sighted New Holland on Christmas Day 1696, and four days later anchored inshore of a large island, upon which they landed next day. Carrying out a thorough exploration, they were impressed by the great number of wallabies to be seen; these they likened to rats and hence gave the island the name Rottenest. Some pieces of wreckage were found, but they could not identify them. From the hills they could see the mainland, and on 5th January 1697 Vlamingh, with a party of 86 armed men, landed on the opposite shore.

The party moved inland, there discovering a large sheet of brackish water and an abandoned aboriginal camp, beside which they spent the night. Next day they split into three parties and carried out a thorough exploration. On the 9th they brought the ships over to the anchorage at the mouth of a river, which Vlamingh and boats' parties explored during the following days for a distance of about 50 miles. Their most remarkable discovery was a hitherto-unknown bird, the fabulous black swan of the ancients. Several specimens were captured and taken back to Batavia, where they died before they could be sent to Europe. Vlamingh named his discovery the Black Swan, or Swan, River, and it is so named on the contemporary chart. However, Nicholas Witsen, Chairman of the Dutch East India Company, wrote later that the discovery was named Witsen River in his honour; but that claim has never been substantiated.

Continuing his course northward, Vlamingh carefully investigated the coast for wreckage and meanwhile conducted an excellent running survey. He anchored near the present Geraldton but did not call at Houtman Abrolhos; the channel between those rocks and the mainland is now called Geelvink Channel. On 4th February the voyagers reached Dirk Hartog Island and anchored. On the northern point they found a pewter plate left by Hartog and Miebais, and, leaving another in its place, they took it back to Batavia. (See VLAMINGH PLATE.)

The present Shark Bay was reasonably charted on the western side and they left the mainland, near the present North-west Cape, on 21st February—with a salute of guns "as a signal of farewell to the miserable South Land".

An excellent chart of the western coast was compiled by Isaac De Graaff (cartographer to the Dutch East India Company) who may have been on board. The chart, published by Van Keulen, was in use by shipping for more than a century.

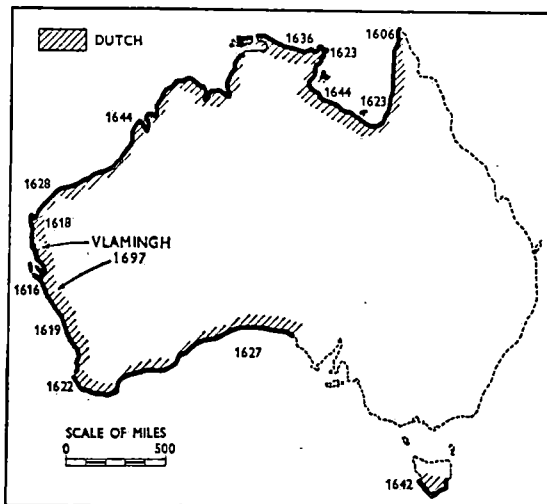


FIG. 6. VLAMINGH IN THE WEST

Vlamingh's expedition was specially notable for the careful land explorations which were made.

ENGLISH CONTACTS, 1622-99

The first association with Australian territory on the part of an English ship occurred on 25th May 1622, when the *Tryal*, an East Indiaman, was wrecked on a reef immediately north of the Monte Bello Islands, W.A. The commander, John Brooke, had been relying on directions by Captain Humphrey Fitzherbert of the *Royal Exchange*, who had used the southern route in 1620 but who had not approached anywhere near the South Land. When Brooke sighted land in the vicinity of North-west Cape, he was misled by Fitzherbert's directions, which he considered advised him to continue on a north-easterly course. In doing so he met disaster—92 lives and considerable treasure were lost. (See *TRYAL, WRECK OF THE.*)

Another English ship, the *London*, Captain John Daniel, came in sight of the coast of New Holland in June 1681. An interesting sketch survey on Daniel's part was one which he made of the northern (Wallabi) group in Houtman Abrolhos, and which was published as a chart, among others, by Alexander Dalrymple (*q.v.*) about a century later.

Visit of the "Cygnet". The English ship *Cygnet*, Captain Read, left Timor in 1687 on a southerly course to visit New Holland. The present Seringatam Reef was sighted on 31st December, and a landfall was made on 4th January 1688 in the vicinity of the present Pender Bay, about 25 miles south-west of Cape Leveque. The ship ran north-eastward along the coast, came to anchor next day, and then was careened, supposedly somewhere near the present Cygnet Bay in King Sound. The navigational evidence of the ship's movements is insufficient to afford precise knowledge of the location where the first English vessel was refitted on the Australian mainland. Weight of evidence,

however, renders it most probable that the location was in the present Karrakatta Bay, near the present King Sound. Certainly the *Cygnets* did not penetrate into that sound.

No geographical discovery was made. The main interest of this visit was due to the fact that William Dampier (*q.v.*) was on board as a member of the ship's company of buccaneers. During the stay, Dampier studied both natural history and the aborigines, and his observations were published in his now-celebrated book, *A New Voyage Round the World* (1697). This work, which quickly ran to several editions, came out a few years after Robinson's *An Account of Several Late Voyages & Discoveries to the South and North* (1694), in which Tasman's voyage of 1642 was translated into English. Both books appeared when public attention was being directed to the formation of chartered companies trading to the Indies and the South Seas, and, consequently, the two narratives were influential in reviving interest in the still-unknown Terra Australis.

It is uncertain if the *Cygnets* departed from New Holland on 12th February or 12th March, the first date being that given in the manuscript version in the British Museum while the latter is given in the published narrative. As the first date would permit of sufficient time for careening the vessel it is more likely to be correct. Dampier's published narrative is full of inconsistencies, and many perplexing statements leave the suspicion that he was often romancing rather than recording facts.

Dampier in H.M.S. "Roebuck". Just before the close of the seventeenth century William Dampier made a second visit to New Holland, now as commander of H.M.S. *Roebuck*. Hopes had been entertained that this voyage would result in some important discoveries, but, owing to Dampier's mismanagement and his poor abilities, both as an explorer and a commander, the voyage was unsuccessful. The discoveries made during the voyage were relatively slight.

For Dampier the year 1697 was momentous: by the opportune publication of his book, *A New Voyage Round the World*, he was brought to the notice of influential people when his advice was most wanted. Actually, he was in the unique position of being (probably) the only man in England who had voyaged across the Pacific, touched at New Holland, and spent many years in out-of-the-way places in the West Indies and the East Indies.

Peace with France had just been concluded and in London one of the activities in Whig circles was the formation of a new chartered company trading to the Indies. This was the New or English East India Company, which, after many behind-the-scene moves, was finally granted its charter in September 1698. Although the company was to trade normally with India in competition with the old company, its eyes were also on wider fields.

Other ventures, notably the Darien scheme of the Company of Scotland and the extraordinary pirate-suppressing or pirate-treasure-hunting voyage of Captain Kidd to Madagascar, also directed the attention of the Whig lords to the South Seas.

Dampier's two patrons, Lord Charles Montague (later Earl of Halifax), Chancellor of the Exchequer, and the Earl of Orford, First Lord of the Admiralty, were heavily involved in these ventures and Dampier was in contact with both. Who proposed the voyage to the South Seas in a King's ship cannot be determined, but the Earl of Orford took the remarkable step of giving the former buccaneer an appointment as captain, R.N. It should be noted that any discovery of commercial importance made by Dampier in H.M.S. *Roebuck* would, in the normal course of events, be beneficial mainly to the New East India Company and so to the Earl of Orford.

The Admiralty allowed Dampier to frame his own plan of the voyage, his most important objectives being the unknown eastern coasts of New Holland and New Guinea. Hoping to sail from England by September, Dampier at first planned to go by Cape Horn, then sail westward across the Pacific to discover either Terra Australis or the east coast of New Holland.

It is most doubtful if this plan could have been carried out in such a vessel as the *Roebuck*, and under such an incompetent commander as Dampier. However, as the departure of the ship was delayed (possibly for reasons connected with the New East India Company, which was not finally chartered until mid-September), Dampier was not asked to submit his proposals until November; he then suggested that he should proceed by the Cape of Good Hope to the western coast of New Holland, and then go by any route he should consider best, either north or south about to the Pacific Ocean. Accordingly, he received instructions on those lines from the Admiralty, and the *Roebuck* sailed from the Downs on 14th January 1699. She carried 12 guns, 50 men and boys, and provisions for 20 months.

The voyage commenced badly, with dissension between the officers and with many acts of insubordination against the command, due to Dampier's ignorance of naval procedure and also to his lack of experience in a position of authority. The Admiralty had instructed him carefully in anticipation of such trouble, but in dealing with his first lieutenant, Fisher (who was put ashore in Brazil), he failed to follow those instructions—a factor that decided against him at the court-martial held after his return to England. Other causes of trouble developed, with the result that the ship's company was in a state of near-mutiny during the early stage of the voyage.

When the western coast of New Holland was sighted, on 30th July 1699, conditions on board



Detail

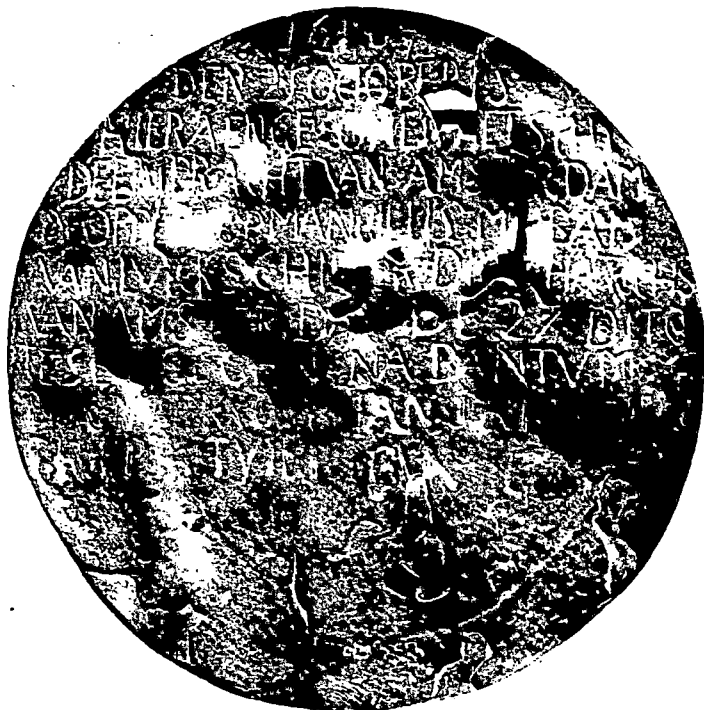
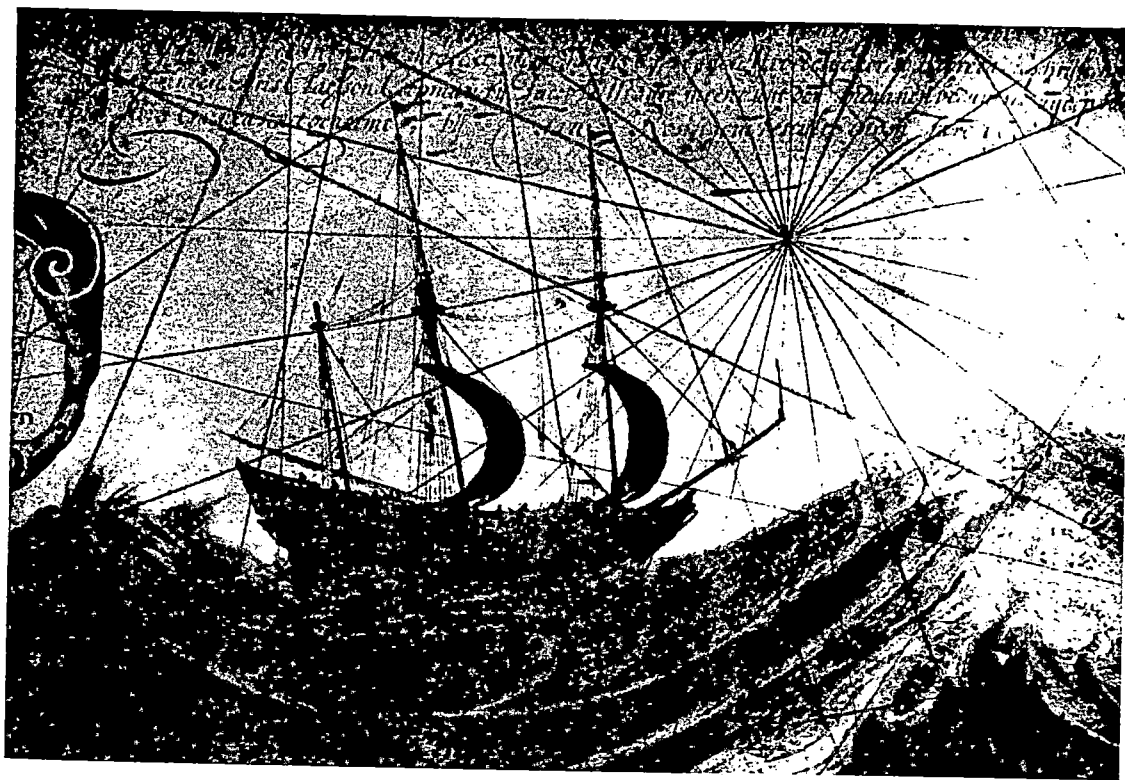
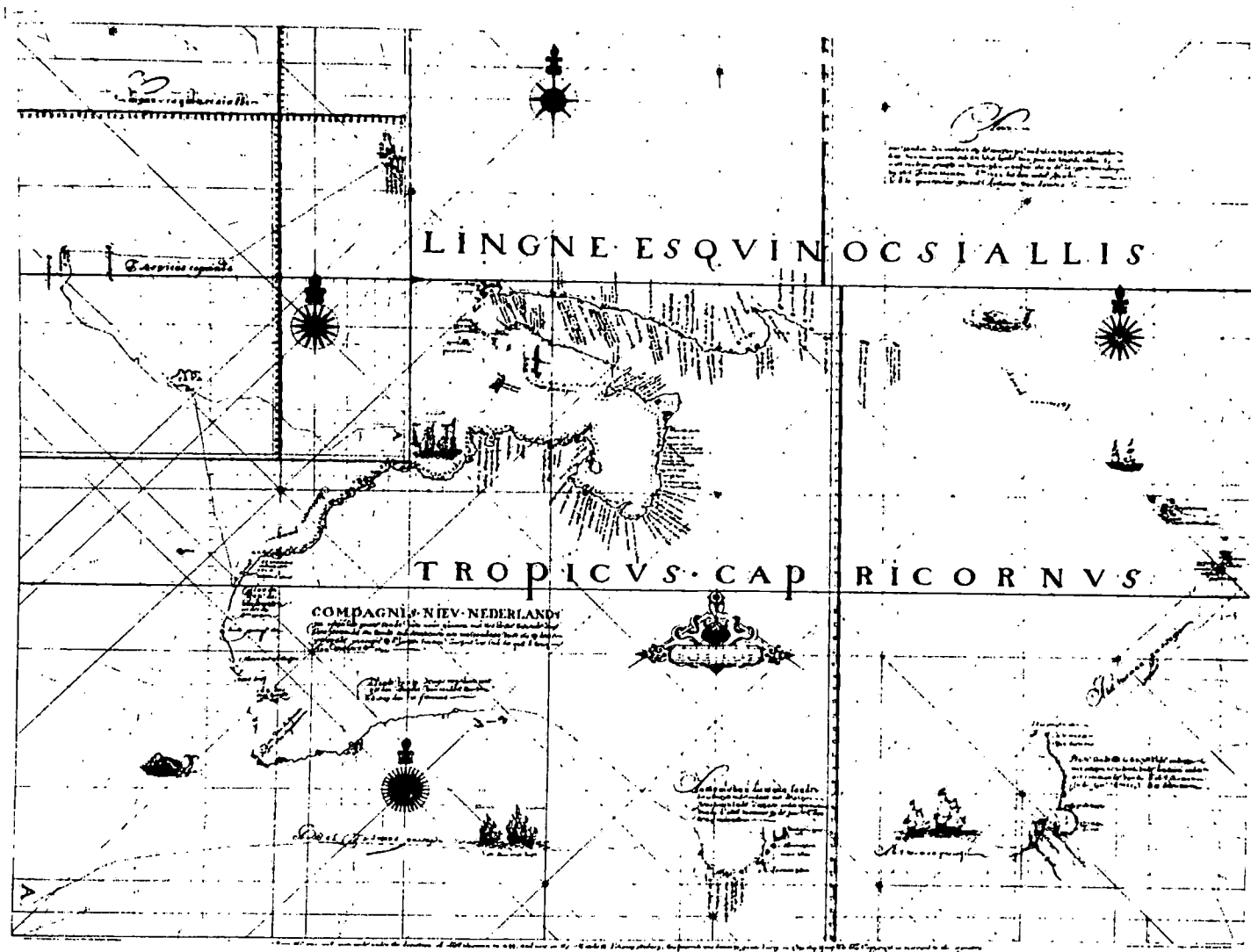


Photo: Frank Hurley

The Hartog Plate, left fixed to a post on Dirk Hartog Island, W.A., in 1616 by men of the Dutch ship *Eendracht*. The plate is now in the Rijksmuseum, Amsterdam



Detail from the Hessel Gerritsz chart of the Pacific, 1622, showing a Dutch merchant ship. From a copy in the Mitchell Library, Sydney, of the original in the Dépôt des Cartes de la Marine, Paris



Australian News & Information Bureau

Tasman's map of 1644

By courtesy of the Mitchell Library

From the facsimile made in 1946 by James Emery of the map in the possession of the Trustees of the Mitchell Library, Sydney

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were bad; they account for the poor achievement in the months that followed. Dampier decided against the southern route owing to the tempestuous season, but, in fact, the northward course he adopted was a less practical route. This was unknown to Dampier, who was governed in his decision by the knowledge of the discovered coastline as shown in the charts of that period.

Running northward, Dampier entered Shark Bay (he named it Shark's Bay), failed to notice the newly-erected post and plate set up by Vlamingh, searched unsuccessfully for water, and then resumed his voyage northward to North-west Cape. Here the south-east monsoon kept him out at sea and he lost sight of the mainland; but, a few days later, a change of wind permitted him to approach it on a south-east course and he anchored near some islands. Again Dampier's navigational information given in his narrative is both scanty and perplexing; no definite location can be assigned to the anchorage, but it is presumed to be among the islands which P. P. King (*q.v.*) later named Dampier's Archipelago. No water was found here, but Dampier was enthusiastic over the beauty of the wildflowers, which he described clearly.

Resuming a course north-eastward, the *Roebuck* anchored again and a landing was made about 50 miles from the present Roebuck Bay, which, however, was not entered. Near his anchorage some brackish water was found and a brief skirmish occurred with aborigines. Dampier now was weary of the country, and, with his crew showing signs of scurvy, he followed the coastline indifferently, failing to penetrate into the shoaler regions because he feared to be left on a lee shore with the onset of the north-west monsoon. Finally, on 6th September, he left New Holland for Timor, discovering en route the present Browse Islet.

Leaving Timor on 12th December, Dampier steered for the western side of the northern coast of New Guinea, which he passed along well out to sea in order to make the western extremity as set down on the charts. This was, in fact, the north-eastern coast of New Ireland, which the *Roebuck* reached in March 1700. On the 9th Dampier sighted and named Cape St George, the southern end of New Ireland.

From now on the ex-buccaneer was in undiscovered regions. Here, at last, was his opportunity to penetrate on into the unknown and to discover Terra Australis, the objective for which the voyage was planned. However, conditions on board the *Roebuck*, together with Dampier's faintheartedness, made such an undertaking impossible. Even a more resolute commander, in a well-found ship, would probably have found the task beyond him with the near approach of the south-east monsoon.

What Dampier did, firstly, was to sail westward along the new coastline, name Cape Orford and Port Montague after his two patrons, refresh his

crew while he lay at anchor at Port Montague for a week, and then resume his course westward. In his narrative he gives a long and interesting description of the land and its people. On 24th March the shore was found to trend north-west, and Dampier penetrated into what proved to be a strait separating the newly-discovered coast from New Guinea. On the large separate island he bestowed the name Nova Britannia—the New Britain of today. It was left to a later navigator, Carteret, to discover that another strait separated New Britain from New Ireland. The strait was named Dampier's Passage (now Vitiaz and Dampier straits), and the many islands adjacent to it were named after influential Englishmen.

Having reached the north of New Guinea again, Dampier continued his course westward. This meant, in fact, the abandonment of his chance of discovery, but all on board were weary and the ship was leaking, and those circumstances overrode any resolution that the commander may have had. The *Roebuck* did not reach England; she sank at anchor off Ascension Island in February 1701.

Dampier and his crew were returned to England by passing ships. There, in 1702, the commander had to face charges brought against him by Fisher, then returned from exile in Brazil. The finding of the court-martial was that Dampier could not be regarded as "a fit person to be employed as commander of any of Her Majesty's ships". Nevertheless, he was given soon afterwards command of a privateer and in this he voyaged in the South Seas, though he did not again visit Australia.

Meanwhile, in 1703, he published another book, *A Voyage to New Holland*, and this, although less successful than his earlier work, impressed many people. Indeed, Dampier's greatest contribution to the story of Australian exploration lay in the popularity of his books, which, in time, made known the romance and possibilities of the South Seas. In this he was followed by such writers of fiction as Defoe and Swift, and by many journalists, as well as by collections of voyages edited by Churchill, Harris and Campbell, and in the next 50 years by narratives of circumnavigators, from Woodes Rogers to Anson.

All this literary effort was instrumental in directing England's eyes to the Pacific, and it led eventually to the voyages made by Captain Cook.

DISCOVERY DURING 1700-70

Although there were many English voyages in the Pacific during the period 1700-50, none approached Australian waters; these voyages, therefore, are not discussed in the present article. During this period, however, the Dutch continued to send ships to New Holland on charting expeditions, and these are briefly described. The many visits by Dutch and English vessels en route to the East Indies after 1700 are not enumerated.

Dutch Work in 1705. In January 1705 a dual Dutch expedition was dispatched to New Guinea; one, consisting of the frigate *Geelvink* and two tenders, was to explore the northern coast of New Guinea, while the other, consisting of the flute *Vossenbosch* and two tenders, was to explore the northern coast of New Holland and the southern coast of New Guinea. Both voyages were directed towards surveying and charting in greater detail the discoveries of earlier navigators. In the case of the *Geelvink*, the object was to follow up Dampier's discoveries; in the case of the *Vossenbosch*, it was to investigate some of Tasman's work, which was known to have been hurried and probably faulty in consequence.

The *Geelvink* explored the extensive bay which now bears its name. The *Vossenbosch* explored principally the coast of the present Northern Territory in great detail; the chart of the voyage shows that the present Dundas Strait and Port Essington, among other features, were closely surveyed. However, by July of that year (1705) increasing sickness among the crews, together with the influence of the south-east monsoon, made a return voyage imperative. Before the *Vossenbosch* reached Macassar the skipper, Maarten van Delft, and several officers had died.

Later Dutch Voyages. In 1721 an expedition was sent by the Dutch West India Company to explore the "unknown part of the world situated in the South Sea to the westward of America". It consisted of the ships *Arend*, *Tienhoven* and *African Galley* under the command of Jacob Roggeveen; the voyage followed the route that Dampier at first planned for the *Roebuck*. In Australasian waters the ships passed along the northern coast of New Guinea, but made no discoveries of importance.

In June 1727 the ship *Zeewijk*, commanded by Jan Steijns, was wrecked on the Pelsart Group of Houtman Abrolhos. The survivors were forced to build a small sloop to sail to Batavia, where they arrived in April 1728. Some exploration and charting had been undertaken.

There are records of further voyages to the western coast of New Holland by Dutch ships, and the surveying voyages by the ships *Rijder* and *Buis*, under the command of Lieutenant Jean Etienne Gonzal and First Mate Lavienne Lodewijk Van Asschens, respectively, should be mentioned here. This expedition was conducted in the Gulf of Carpentaria, each ship making an independent voyage, but further unsuccessful attempts were made to investigate Torres Strait for a passage through. In this vicinity the *Buis* lost a boat with eight men. No landings or inland explorations were made on the coast.

Wide Interest in the Pacific. As mentioned earlier, interest in the South Seas was growing in both England and France, as well as Holland.

With the publication of de Brosse's *Histoire des Navigations aux Terres Australes* (1756) and its English counterpart, Callander's *Terra Australis Cognita* (1766-68), two important collections of voyages turned contemporary thought and action to the Pacific. In the next few years the British successfully sent out Byron, Carteret and Wallis, and Cook; the French sent Bougainville, de Surville, Marion du Fresne, and La Pérouse. The Spanish, greatly agitated by this invasion of an ocean long regarded as their own, also dispatched missions to occupy newly-discovered islands.

It is of particular interest that de Brosse advocated that France should settle New Britain with her foundlings, beggars and criminals. Callander also proposed that New Britain should be settled by England. Both works include interesting maps by a celebrated French cartographer, Robert de Vaugondy. In spite of the pains that both geographers, de Brosse and Callander, took to deduce the existence of a great southern continent from the assumption that the northern land-masses required a counter-balance in the south, it was noteworthy that the scientific Vaugondy did not portray in his maps any representation of such mythical lands.

A contemporary of Callander's, the British hydrographer Alexander Dalrymple, also published two important works on South Pacific voyages. To Dalrymple goes the credit of making public in these works the knowledge that Torres navigated to the south of New Guinea; but many charts between 1620 and 1770 portray a strait separating New Guinea from New Holland, giving proof that details of the voyage were known to cartographers, especially those of the early seventeenth century.

Carteret Re-discovers the Solomons. It is not necessary in this article to give details of the voyages made by Captain the Hon. John Byron in H.M.S. *Dolphin* in 1764-66, or by Captain Samuel Wallis in the same vessel in 1766-68, since neither of these navigators approached Australasian waters. However, the second vessel in Wallis's expedition, the *Swallow*, did make a voyage of significance to Australia's story.

The *Swallow* was commanded by Captain Philip Carteret, who had become separated from Wallis near Magellan Straits, and had voyaged on his own initiative across the Pacific under difficult conditions. He sailed along the northern coasts of the Solomon Islands in August 1767, but failed to recognize them as part of Mendaña's lost discovery. On 26th August the high land of New Britain was sighted, and next day Carteret penetrated into the bay in which Dampier had named St George. An anchorage was found near Cape St George, and named Gower Harbour.

After a stay of a few weeks refreshing, Carteret sailed, but bad weather and currents forced him into St George's Bay. He thus made the discovery

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that this bay was a strait, and the large island which was separate from New Britain he named New Ireland. Carteret also sighted and named the Admiralty Islands.

COOK'S VOYAGES

James Cook was 40 years of age when, in 1768, he was given command of H.M. Bark *Endeavour*, to undertake a voyage to the South Seas. The ostensible purpose of the expedition was to make observations in Tahiti of the transit of Venus across the face of the sun, but secret instructions were issued to Cook by the Admiralty, ordering him to search for the Great South Land supposed to exist in the South Pacific. For information concerning the *Endeavour*, together with the early part of Cook's first voyage, see COOK, James.

Seeking New Holland's East Coast. The *Endeavour* left England on 25th August 1768. Observations at Tahiti were undertaken, and in August 1769 Cook cleared the Society Islands and laid a course southward in search of the Great South Land. After circumnavigating New Zealand, he decided to return to England by way of East Indies, exploring the east coast of New Holland en route.

There was an extensive geographical library on board the *Endeavour*, including de Brosse's *Histoire*, published in 1756, which contained the charts by Vaugondy on which the discoveries of Tasman—the southern part of Tasmania and the western coast of the North Island of New Zealand—were laid down. The imaginary eastern coast of New Holland was shown by a pecked line and joined the discoveries of Quiros, which were displaced westward. The Dutch discoveries on the southern, western and northern coasts of Australia were shown as a continuous coast separated from New Guinea by a strait. Torres had, of course, long before passed through the strait which bears his name, but the details were uncertain when Cook sailed, although the fact that Torres had passed south of New Guinea had not been entirely forgotten and it was strongly suspected that a navigable strait existed. All these geographical problems provided Cook with a strong inducement to survey the eastern coast of New Holland.

EAST COAST SIGHTED. At daybreak on 20th April 1770 land was sighted by Zachary Hicks—usually rendered Hicks—the first lieutenant. (This date, which differs from that given in Cook's own log, is the correct one according to modern computation. Cook's log-dates from 6th October 1769 to 9th October 1770 are not adjusted since he had not when passing the 180th meridian of longitude made the change of date which is now customary.)

The land first seen was named after the officer who sighted it, but it is now marked on the chart as Point Hicks Hill, near Cape Everard (a later name), and it is generally accepted that this cape

may be taken as Cook's starting-point on the Australian coast. (A detailed discussion of this problem of nomenclature will be found in the *Victorian Historical Magazine*, vols II and V.)

During the previous few days bad weather had forced the *Endeavour* northward; but for this Cook undoubtedly would have discovered Bass Strait.

From Point Hicks, Cook worked northward along the coast, conducting a running survey and naming conspicuous landmarks or noting a description of them in his journal. Close to the Five Islands (near Wollongong), at a spot he named Red Point, an attempt was made to land but the surf was too great.

BOTANY BAY DISCOVERED. At 2 p.m. on Sunday, 29th April, the *Endeavour* anchored in a commodious bay. This anchorage was first named Stingray Bay, then Botanist Bay, and later still Botany Bay; the north head was named Cape Banks and the south head Point Solander. At 3 p.m. Cook, Banks, Solander and Tupia (a native of Tahiti who had volunteered to accompany the *Endeavour* to Europe) landed with a party of seamen and marines.

At the boat approached the shore, a few aborigines advanced; most of these soon ran away but two boldly opposed the landing. A musket was fired over their heads and one threw a stone. A charge of small shot was then fired, to which the natives replied with a couple of spears; a second discharge drove them off.

The ship anchored in a position about half a mile from what is now known as Kurnell wharf, on the south shore. During the stay of the ship a seaman, Forby Sutherland, died of consumption and was buried on 1st May at Point Sutherland. Before they left, an inscription giving the ship's name and the date was cut on a tree near the watering-place; all traces of this tree have been lost. The precise point where Cook landed is not stated in the journals and much confusion on the subject is due to two monuments at Kurnell which are usually regarded as attempts to indicate the precise spot. One of these, a tablet erected in 1822 by the Philosophical Society of Australasia, was not so intended; indeed, the inscription on it was deliberately so worded as to avoid the claim. The second, an obelisk erected in 1870 by Thomas Holt, is adjacent to the rocks or, more probably, the sandy beach where Cook first landed.

During their stay Cook, Banks, Solander and some of the principal officers of the *Endeavour* made short excursions inland; they also surveyed or closely explored the bay.

PORT JACKSON AND BROKEN BAY. On 7th May Cook weighed anchor about 7 a.m. and stood out through the heads to resume his northward voyage. At noon the ship was abreast of an open bay; this was Port Jackson, seen between North and South

Heads but with Middle Head screening the portion which extends westward. Cook was aware that the bay or harbour was probably a good anchorage for, he named it in honour of George Jackson (afterwards Sir George Duckett, *q.v.*), one of the Secretaries of the Admiralty. Time did not permit him to examine it.

About sunset on 7th May some "broken land, that appear'd to form a bay", was seen, and this Cook named Broken Bay. The other Secretary of the Admiralty, Philip Stephens, was honoured four days later by having an inlet named after him—Port Stephens. This appeared to Cook from the masthead to be sheltered from all winds.

NORTH FROM POINT DANGER. On 16th May the ship was off the north head of the Tweed River, which Cook called Point Danger. On the 17th he saw and named Cape Morton, after the Earl of Morton, president of the Royal Society in 1764-8, who took a leading part in originating the expedition. (Flinders, following Hawkesworth, mistakenly changed the spelling to "Moreton" on his chart, although Cook's earlier charts were correct; and the incorrect form has been retained.)

On 23rd May, after rounding Breaksea Spit, a second landing was made to obtain fresh water; Bustard Bay commemorates this landing as someone shot here a bustard weighing 17½ lb. Here, also, occurred an extraordinary incident—the captain's clerk, Richard Orton, while drunk in bed, had his clothes cut off his back and the lobes of both his ears cut off. At first a midshipman named James Matra (*q.v.*) was blamed, but Cook later exonerated him; the evidence points to the culprit having been a member of Banks's staff.

The *Endeavour* now proceeded slowly along the coast, lowering boats frequently to sound and explore, and sometimes anchoring for the night. From 28th May the track lay among the numerous small isles (named, by Cook, Northumberland and Cumberland Isles) that stud the chart between latitudes 20° and 22° S., and on 4th June the voyagers entered Whitsunday Passage.

On the 6th, when off what is now Townsville, the voyagers found their compass much disturbed by the nearness of what they termed Magnetic Island. From about this point, Cook commenced to honour important personages by bestowing their names on prominent features on the coast—an action which, combined with other entries in his journal, indicated that he had developed a high opinion of his discovery.

For some time now Cook had noticed that something to seaward was making a lee for him. If there had been nothing there, he would have expected a rough sea with the constant south-east wind. Instead, he was within the smooth waters of the Great Barrier Reef. Vaugondy's map indicated that the land discovered by de Quiros might be to the eastward of this coast; it was of course

many miles distant, but this was unknown to Cook. He decided to investigate, and so he left the coast and steered north-east.

"ENDEAVOUR" STRIKES REEF. On 11th June, at 11 p.m., after sounding in from 20 to 17 fathoms, the ship struck on a coral reef; this was the danger-point now known as Endeavour Reef, a little north of Weary Bay. The *Endeavour* was not making much water but was bumping hard, so in the morning Cook started 30 tons of fresh water and hove overboard some condemned stores, the iron and stone ballast, and six guns and carriages. At 10 p.m. on the 12th the ship was got afloat, but after midnight the leak began to gain on the pumps, and at 3 a.m. there was 45 inches of water in the hold. A sail on to which hair, oakum and wool were sewn was passed under the bows and so dragged over the leak, much in the same manner as collision mats of today but then known as "fothering"; thus one pump kept the hold free, the ship making only 15 inches in an hour.

A boat was sent on to look for a likely spot to beach and repair the ship, and on 18th June she was anchored in what was called the Endeavour River, the present site of Cooktown. On the 22nd the ship, after being lightened by the removal of everything possible, was hauled well up the bank on the north side of the river, with her bow among the mangroves, and when the tide went down it left her nearly dry. The coral-rock, it was found, had cut through three planks on the starboard bow and injured three others, leaving a piece wedged in the hole.

On 4th July the ship was afloat again but still leaking, so the men erected a staging, brought the ship alongside it, and continued the repairs until 20th July; adverse winds then detained them within the bar, but after a thorough overhaul, and with a renewed stock of fresh water and some turtle, they got under way on 6th August.

During their stay aborigines came to the camp occasionally, but no progress was made in getting to know them. The natives refused the presents offered them, but were anxious to obtain turtle-meat, and when that was denied them they attempted to seize it, fired the grass round the camp, and at last had to be driven off with small shot. Here also a kangaroo was shot.

The course of the *Endeavour* from this time was full of difficulties; the Barrier Reef here closes towards the land and the ship required continuous and exacting reef-navigation. At last the explorers saw what Cook hailed as an opportunity of getting outside the Barrier, and they passed through Cook's Passage, a little north of Lizard Island.

TORRES STRAIT RE-DISCOVERED. Cook, however, was not content to leave the newly-discovered coast. He wanted to know whether New Holland and New Guinea were joined. He had with him the charts by Vaugondy, which clearly indicated

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a passage between New Holland and New Guinea. It was this problem of navigation he was determined to clear up, and so, fearing that he might miss the strait, he sailed along the edge of the Barrier Reef.

On 17th August the wind fell calm and the ship began drifting towards breakers; the boats were got out, and with difficulty towed her clear. "In this truly terrible situation," Cook wrote afterwards, "not one man ceased to do his utmost, and that with as much calmness as if no danger had been near." A light breeze sprang up, an opening was seen, and the ship steered for it; soon, then, she passed through Provisional Channel and was once more at anchor inside the Barrier.

"It is but a few days ago that I rejoiced at having got without the Reef," Cook wrote, "but that joy was nothing when compared to what I now felt at being safe at an Anchor within it."

From this time onward Cook was determined "to keep the Mainland on Board . . . let the consequence be what it will", and so he picked his way with the boats ahead almost all the time, until on 22nd August he passed through the strait between Cape York and New Guinea.

Of this remarkable undertaking, Cook wrote in his journal: "We have put this [problem] wholly out of dispute; but as I believe it was known before, tho' not publicly, I claim no other Merit than the clearing up of a doubtful point." Thus, with disarming modesty, Cook dismissed the anxieties and doubts he may have felt, and dismissed, too, the superb skill in navigation which he, as a trained hydrographic surveyor, had demonstrated.

COOK CLAIMS NEW SOUTH WALES. Cook named the northern extremity of this new coast Cape York, in honour of his late Royal Highness the Duke of York, the King's brother; and to the opposite islands stretching northward he gave the name Prince of Wales, in honour of the King's eight-year-old son. At first he named the new coastline New Wales, but later, while in Batavia—between 5th October and 26th December 1770—he altered this term to New South Wales.

On 22nd August (1770) Cook and his company landed on an island near Cape York and there proclaimed possession of the whole eastern coast in the name of King George III. The scene of this historic ceremony was named Possession Island.

Satisfied that he was through the strait, Cook now set more sail, and narrowly escaped running on a reef near Booby Island. At first he made his way to the New Guinea coast, but, taking into consideration the health of his company and the state of the ship (which was still leaking), he decided that it was not worth while to survey coasts already explored by the Dutch, and so he made for Savu near Timor, where he refreshed the crew. He reached Batavia on 11th October and England on 13th July 1771.

The officers chiefly responsible for the survey and observations under Cook were Charles Green the astronomer, Robert Molineux the master, and Richard Pickersgill the master's mate. With their help Cook compiled the *Chart of the East Coast of New Holland, by James Cook, 1770*, on which he wrote in more than 100 names of places. This chart was published by Dalrymple in 1789 in two sheets, principally for the use of ships proceeding to the new settlement. Considering the nature of the running survey, the accuracy of the positions (which was, no doubt, chiefly due to Cook himself and to Green) is often remarkable, especially as there was no chronometer on board the ship, and the longitude had to be observed by lunar observations. Cook's originals of these charts are in the British Museum.

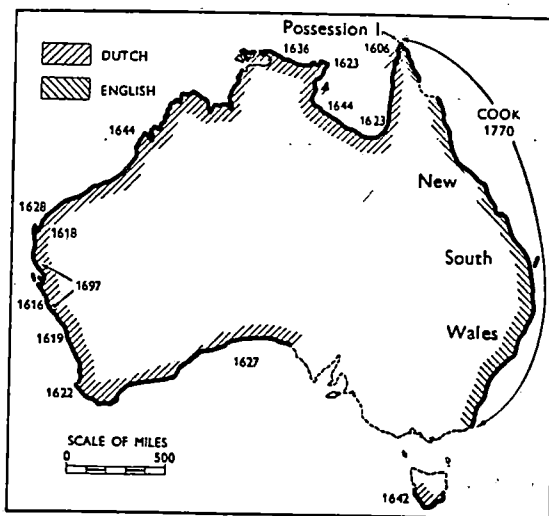


FIG. 7. COOK ON THE EAST COAST, 1770

Cook's Second Voyage. This expedition, undertaken by Cook in H.M.S. *Resolution*, in company with Tobias Furneaux in command of H.M.S. *Adventure*, is only of minor importance so far as Australia is concerned. The ships left England in July 1772 and parted company in February 1773 after entering the Antarctic circle. Having gone as far south as he considered prudent, Cook altered his course for Van Diemen's Land, where he intended to call on his way to New Zealand, but he met with a heavy gale and sea and ran before it direct to Dusky Bay in New Zealand.

On 11th May the *Resolution* made Queen Charlotte Sound; here Cook found the *Adventure*, which had put into Adventure Bay in Van Diemen's Land, stayed there five days, and then sailed north along the coast until it trended away to the west. Furneaux, who believed that Van Diemen's Land was part of the mainland, took this westward trend to indicate a deep bay, and decided to head for the New Zealand rendezvous. Cook accepted Furneaux's opinion on this point, and went

off to Tahiti to recruit and then make south again in pursuit of the main object of the voyage—to search for an Antarctic continent. The rest of the *Resolution's* voyage is outside the scope of the present article except for the fact that Norfolk Island was discovered (10th October 1774).

Cook's Third Voyage. Cook sailed again on his third and last voyage in the *Resolution* (accompanied by the *Discovery*, Charles Clerke in command) on 12th July 1776, primarily to search for land in the Indian Ocean reported by Kerguelen, then to explore such North American inlets as seemed likely to lead to the Atlantic. On 26th January 1777 the ships arrived at Adventure Bay in Van Diemen's Land, but left a few days later after refreshing. On 12th February, they were in Queen Charlotte Sound, whence they proceeded to Tahiti. Further details of the second and third voyages are given in Cook's biography.

FRENCH VOYAGES

Ten years after the publication of de Brosses's *Histoire des Navigations aux Terres Australes*, mentioned above, a French expedition was sent into the South Pacific, the first of a series which require brief notice in this article. In most instances, the voyages in question were conducted principally in the Pacific and in each instance the association with the Australian continent was only through passing visits. Additional details of these voyages, therefore, are given in the biographies of each navigator.

Bougainville in the Pacific. Late in 1767 Louis Antoine de Bougainville, commanding *La Boudeuse* (26-gun frigate) and *L'Etoile* (storeship), sailed from Montevideo for the Pacific. After passing across that ocean he visited the New Hebrides (which he called the Cyclades), then penetrated into the Coral Sea in latitude about 15°S. On the night of 4th June 1768 the ships had narrow escapes from wreck on an isolated reef, which they called Diane, and two days later they sighted reefs, considered to be those since named after Bougainville, about 100 miles east of Cooktown.

In his narrative Bougainville stated that from these reefs some of his people could see land in the south-west. If that report was true, the land could only have been New Holland; but from the position of the present Bougainville Reef that land would not have been visible. Taking into account Bougainville's probable error in longitude and the courses steered, it appears from the narrative that the present Bougainville Reef was not the reef sighted. This reef is small and can be seen in its entirety, whereas the reefs sighted on 6th June were about 25 miles apart. Either Bougainville saw the outer edge of the Great Barrier Reef (in which case he could have seen the eastern coast of Queensland) or he sighted reefs farther eastward (possibly Moore or Willis Reefs). In either case the

Diane Bank shown on the modern chart is not that seen by Bougainville. Great areas of the Coral Sea are still unsurveyed, and quite possibly Bougainville's shoal of Diane may be uncharted still.

Although Bougainville claimed to have sighted land, he did not attempt to confirm his discovery, having no desire to penetrate the reefs. He was short of provisions and, discouraged by Dampier's description of the west coast of New Holland, he expected little to refresh his weary crews. Thus he altered course northward, to sight at dawn on 10th June the southern coast of New Guinea in the vicinity of either the present Orangerie Bay or Hood Bay. Few lands Bougainville had seen bore a more pleasant aspect than this one; therefore he named it Louisiade, after his king.

Bougainville wished to investigate whether New Guinea and New Holland were separated, as shown on the charts by Vaugondy; but the weather, his doubts, and the state of his vessels convinced him that the risk was too great to penetrate north-westward. Accordingly, he beat his way eastward until, at sunrise on 20th June, he sighted the eastern end of the Louisiades, which, with much joy, was called Cape of Deliverance.

Thence Bougainville steered north-eastward, and on 1st July his vessels passed between two large islands, one of which bears his name (as does the strait), and the other he called Choiseul after the Duc de Choiseul, his minister. Another island he called Bouka, from a word much used by the natives. Bougainville was not aware that he was among the Solomon Islands, which had been "lost" since Mendaña discovered them.

Failing to find anchorage or refreshment, Bougainville sailed towards New Britain and found anchorage on, as he thought, its eastern coast. It was in fact the south of New Ireland, discovered by Carteret four months previously. Bougainville called the port Praslin, but its name is now Gower Harbour, the English name being retained because Carteret had also anchored there. On 24th July Bougainville proceeded on towards the Moluccas.

Surville in the Solomons. The next French visit to Australasian waters was that of Jean François Marie de Surville in *Le St Jean Baptiste*, which left Pondicherry in India in June 1769. The voyage was a private commercial one, with Tahiti as the objective. De Surville sailed by way of the Philippines south-eastward to sight, fortuitously, the Solomon Islands, and to a harbour on the north coast of Santa Isabel Island. Here he found anchorage and refreshment, and he gave it the name Port Praslin. De Surville's nomenclature of the area is still retained with the exception of the name Terre des Arsacides (Land of Assassins), which he gave to the chain of islands.

Like Carteret and Bougainville, de Surville was unaware that he had rediscovered the Solomon Islands. The mystery of the position of these

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islands was finally unravelled by a geographer in France, the Comte de Fleurieu, whose theories on the subject were published in 1790. Subsequent voyagers proved them to be correct.

From the Solomons, de Surville intended to sail for Tahiti, but scurvy was making such ravages amongst his crew that he steered south for Tasman's Staten Land (New Zealand). Here he was on the coast at the same time as Cook; however, the ships did not meet, although they passed within a short distance of each other. From New Zealand de Surville sailed to South America, where he was drowned while trying to land in a small boat at Chilca near Callao.

Marion du Fresne's Voyage. The next French visit began from Mauritius, with the object of taking home a native of Tahiti, named Aoutourou, who had been taken to France by Bougainville. Captain Nicholas Marion du Fresne, a well-to-do resident of Mauritius, led the expedition in *Le Mascarin*, with a consort *Le Marquis de Castries*, Captain Duclesmeur. The ships left Mauritius in October 1771 and called at the Isle of Bourbon (Réunion); there the Tahitian caught small-pox, and died shortly afterwards.

The chief object of the expedition having thus become void, Marion decided to continue his voyage by undertaking exploration in the Antarctic and South Seas. He was greatly influenced by the legend of Gonville's voyage of 1504, and he was determined to rediscover this supposed South Land for France. In the sub-Antarctic he discovered on 13th January 1772 two islands, both of which Cook later called the Prince Edward Islands (giving one of them the name Marion), and on 23rd January another group which Cook named the Crozet Islands, after M. Crozet, the first lieutenant of *Le Mascarin*.

On 3rd March the ships came in sight of Van Diemen's Land; here they followed Tasman's course and came to anchor in, as they supposed, Tasman's Frederick Henrick Bay; the port where the French ships anchored is now called Marion Bay. Here they remained six days, principally occupied in a vain search for fresh water. Contact was made with the aborigines, which led to a skirmish in which several Frenchmen were wounded and several natives killed.

On 10th March the voyagers sailed for New Zealand, sighted the west coast of the north island, and then beat around the northern cape and anchored in the Bay of Islands. Here a long stay was planned in order to refresh the crews and to enable repairs to be made to *Castries'* mast. The Maoris were friendly and the Frenchmen relaxed all precautions; the result was typical of later disasters, for the Maoris suddenly attacked two shore-parties and massacred Marion and two boats' crews—27 men in all—on the night of the 12th and the morning of 13th June. Reprisals were made.

The ships left the Bay of Islands (which the Frenchmen called Treachery Bay) on 14th July to return to Mauritius by the way of Tongatabu, Guam and the Philippines.

Kerguelen Island Discovered. Another French expedition left Mauritius early in 1772 to search for the South Land believed to have been discovered by Gonville in 1504. This was commanded by Yves Joseph de Kerguelen Trémarec in *La Fortune*, with a consort *Le Gros Ventre*, Lieutenant François Alesne de St Allouarn. They left Mauritius on 16th January on a south-easterly course until land was sighted on 13th February. Kerguelen believed from the extensive nature of his discovery that he had found the South Land of Gonville, but a sudden storm prevented him from making a close investigation. His discovery was, in fact, only a small island, which now bears his name. The storm separated the ships and Kerguelen returned to Mauritius. Elated with his discovery, he made another expedition in the following year, only to learn of his mistake. In his disappointment he called the island the Land of Desolation.

Meanwhile, St Allouarn in *Le Gros Ventre*, after being separated from Kerguelen, voyaged towards the western coast of New Holland, which was sighted somewhere near Cape Leeuwin on 17th March. The ship sailed north along the coast and anchored in Shark Bay, where landings were made. A member of the crew, the gunner, was buried ashore; the land was taken possession of for France, and the ship continued her course to Timor. The coast of New Holland was out of sight on 31st March 1772.

EFFECT OF COOK'S VOYAGES

The narratives of Cook's voyages made public geographical knowledge of the Pacific. They had profound influence on subsequent commercial and political activity in that ocean. The information gained during the third voyage encouraged fur-trading voyages to the north-west coast of America, and led to Anglo-Spanish conflict.

In addition, Cook's revelations led to English settlement of New South Wales in 1788, thus bringing about the concept of a base in the western Pacific that had been the inspiration of both Spanish and Dutch navigators. The loss of her American colonies caused England to move into the Pacific along the route recommended by Cook; in the next few decades England's sea-power enabled her to undertake many voyages of importance in Australasian waters.

La Pérouse at Botany Bay. France and Spain, too, were stirred into activity. In 1781 a French geographer, M. Buâche, presented to the French Academy of Science his *Memoir on the Existence and Situation of Solomon's Islands*; it profoundly influenced Louis XVI, King of France, who in

1785 dispatched Jean François de Galaup, Comte de la Pérouse (*q.v.*), in *La Boussole* and *L'Astrolabe*, to examine this and other problems in the Pacific. (This celebrated navigator preferred to sign himself "Laperouse" but the modern form has been adopted in the present work.)

La Pérouse's voyage has no importance in Australian history except for his short visit to Botany Bay early in 1788, following his tragic loss of a boat and its crew at Tutuila. The two French ships remained at Botany Bay for six weeks, in which period a boat was built, and in which period, too, the expedition lost by death a priest and scientist, Louis Receveur (*q.v.*); his grave, still cared for, is a perpetual reminder of a notable French contact with Botany Bay. On 10th March La Pérouse departed into the unknown, never to be seen again. His fate remained a mystery until, in 1826-28, Peter Dillon and Dumont d'Urville (*qq.v.*), established that the two ships had been wrecked, and their companies lost, on Vanikoro in the Santa Cruz group.

Other Visitors. Another notable expedition in the Pacific set out from Spain in 1789; it was commanded by Alessandro Malaspina, in the ships *Descubierta* and *Atrevida*. The vessels visited Sydney in 1793, but no exploratory work was undertaken in these waters. The voyage achieved important scientific results and studied Spain's commercial empire in the Pacific. Regrettably, the details of the expedition were never published in their entirety.

Several other voyages were made in Australasian waters even before the settlement of New South Wales in 1788. Reference should be made, for example, to the voyage of the American ship *Alliance*, Captain Reed. This vessel sailed from the Delaware River, in June 1787, for Canton, via the south of New Holland, and, without dropping anchor once, it arrived at its destination on 22nd December 1787. The European captains were astonished at that out-of-season arrival of an American ship, which was the first to use the Tasman Sea route.

In the next few decades many ships used the route, some calling at Port Jackson. At the time of the Napoleonic Wars, whole convoys of the China fleet sailed by that route, and, once at least, passed through Bass Strait following its discovery.

EARLY SETTLEMENT EXPLORATION

Instructions issued to Captain Arthur Phillip, first Governor of New South Wales, directed him to use the *Sirius* and the *Supply*, when possible, to explore "the several ports or harbours upon the coast, and the islands contiguous thereto, within the limits of your government"—that was, from Cape York to the South Cape of Van Diemen's Land and the islands in the Pacific Ocean within the latitudes of those capes. Phillip had no oppor-

tunity of examining the coast (his ships were required for more important work) but surveys of Port Jackson and neighbouring bays were begun immediately, through the medium of boats.

The survey of Port Jackson was commenced by Captain John Hunter early in February 1788, and it went on as often as opportunity offered until Hunter sailed for the Cape of Good Hope in October; it was revived soon after he returned on 9th May 1789. Surveys of Broken Bay and Botany Bay were also carried on, with Phillip himself taking an active part. The charts thus made sufficed for all practical purposes until about 40 years later.

Island Discoveries. In this early period, too, notable work was done at some distance from the settlement at Port Jackson. For example, in February 1788 Lieutenant Henry Lidgbird Ball discovered the picturesque island which received the name of Lord Howe, and two years later Lieutenant William Bradley carried out a survey of Norfolk Island. (Further particulars will be found in the articles on these islands.)

Some of the First Fleet transports, after discharging their freight, returned to England via China. The voyages were noteworthy and important discoveries were made in the Pacific. Captain Lever and Lieutenant Watts in the *Lady Penrhyn* discovered the islands called the Kermadecs and Penrhyn Island (Tongareva); Captains Marshall and Gilbert in the *Scarborough* and *Charlotte* passed through the groups of islands that now bear their names; and Lieutenant J. Shortland in the *Alexander* discovered Middleton Reef in the Tasman Sea; he also charted a portion of coast in the Solomon Islands, where one group of islands bears his name and a large island was given by him the name New Georgia.

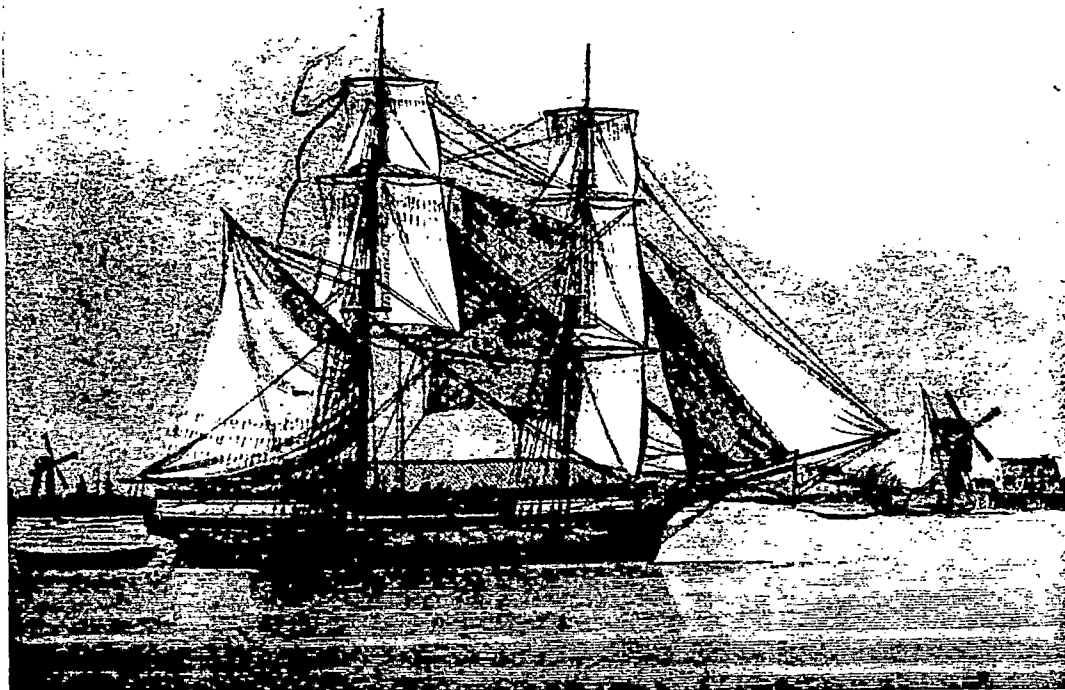
On 21st August 1788 Lieutenant William Bligh, in command of H.M.S. *Bounty*, anchored in Adventure Bay on the east coast of Van Diemen's Land, which he had visited previously while in Cook's *Resolution*. After the mutiny on board the *Bounty*, Bligh sailed to Timor in her launch, and passed through the Great Barrier Reef and Torres Strait in May 1789; he named many islands and bays, including Wednesday Island.

Other Voyages. The brig *Mercury* in 1789 visited and named Cox Bight in southern Van Diemen's Land, and Oyster Bay on the inner side of Maria Island.

Bryant's party of escaping convicts (*see* BRYANT, William and Mary), in their boat-voyage of 1791 along the coast of New South Wales, entered a fine harbour, which can be identified with Cook's Port Stephens. The Bryants were the first to enter and describe the harbour. In addition they discovered the present Hunter River and noted the presence of coal. The boat-voyage created considerable interest in England, and a report on the discoveries must have been received there in official circles.



By courtesy of the Mitchell Library
 Letterhead as used by Nicolas Baudin on *Le Géographe*, from a letter he wrote to Governor King in 1802. The engraving shows both *Le Géographe* (left) and *Le Naturaliste*



By courtesy of the Mitchell Library
 The *Lady Nelson* in the Thames, from James Grant's *Narrative* (1803)

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No action appears to have been taken to verify the reports and no credit has been given to the Bryants.

In December 1791 another visit was made to Port Stephens by the ship *Salamander* and a rough survey of the harbour was made.

Lieutenant John McCluer, in the East India Company's ship *Panther*, with Lieutenant Proctor in the *Endeavour*, commenced a survey on the north and west coasts of New Guinea in July 1791. During this survey, which lasted two months, an extensive gulf was discovered, and it still bears McCluer's name.

In August 1791 the *Atlantic*, a transport in which Lieutenant Richard Bowen (*q.v.*) was naval agent, discovered and put into a new bay, which Bowen named after Admiral Sir John Jervis (afterwards Earl St Vincent) under whom he had seen active service; a rough survey was made and the island at the entrance was named after Bowen. In the following November the whaler *Matilda* put into Jervis Bay to stop a leak, and her master, Matthew Weatherhead made an excellent "eye draught" of the commodious bay.

Events in Torres Strait. In August 1791 H.M.S. *Pandora*, Captain E. Edwards, R.N., returning through Torres Strait with some mutineers from the *Bounty* (*q.v.*), was wrecked on the Great Barrier Reef. The *Pandora* had made some discoveries just previously on the south coast of New Guinea in the Gulf of Papua; thus for many years this area was called on the chart Pandora's Land.

In 1793 Captain Bligh in H.M.S. *Providence*, with Lieutenant Portlock in H.M. Brig *Assistant*, successfully passed through Torres Strait on their return from Tahiti. Much of the nomenclature along the Great North-East Channel and in the north of Torres Strait commemorates that voyage.

Another successful voyage through Torres Strait was undertaken, also in 1793, by the ships *Shah Hormazier* and *Chesterfield*, Captains Bampton and Alt; they navigated through the Coral Sea, Gulf of Papua and Torres Strait, making discoveries which still carry their names. Some of the crew clashed with the natives on an island inside the Great Barrier Reef which they called Tate Island (now Darnley Island) and several Englishmen were killed. The survivors, led by Chief Officer Shaw of the *Chesterfield*, endeavoured to regain their ship in the boat; but, being chased by the natives, they set out for Timor, which they reached after a remarkable boat-voyage.

FILLING IN THE CHART

At least three important voyages touching Australia were made in the last decade of the eighteenth century. These were carried out by expeditions led by an Englishman, George Vancouver; a Frenchman, Bruni d'Entrecasteaux, and another Englishman, John Hayes. Each of these voyages merits discussion in some detail.

Vancouver's Voyage. The main purpose of this expedition was to proceed to Nootka Sound on the north-west coast of America to receive back from Spain the territories which that country had seized. Captain George Vancouver was appointed to lead the expedition in H.M.S. *Discovery* (not Cook's vessel but a later ship), with Lieutenant W. R. Broughton in command of H.M. Brig *Chatham* as tender.

The ships left the Thames in January 1791 and, going by way of Cape of Good Hope, sighted New Holland to the eastward of Cape Leeuwin on 26th August. Their landfall they named Cape Chatham (it is, in fact, an island), after the brig, which came in sight of land first. Two days later they discovered, and anchored in, a fine natural harbour, on which they bestowed the name King George III Sound.

Landing on the 29th they noticed two inner extensions from the sound. The day being the birthday of the Princess Royal, they named the western inner portion Princess Royal Harbour; the other, a northern extension, was named Oyster Harbour, on account of oysters found there. Formal possession was taken of the adjacent country in the name of the King. The ships remained at anchor for about a fortnight and exploratory surveys were carried out.

After leaving King George III Sound, Vancouver sailed eastward along the southern coast until it began to trend more northerly, and then (not being able to afford further time) he resumed his course into the Pacific. The portion of New Holland which he last saw he named Termination Island. He had made a careful running survey of more than 200 miles of coastline, and the names he bestowed on the more prominent features have been retained on the modern chart.

Vancouver passed well south of Van Diemen's Land and sailed on to New Zealand, where he anchored in Dusky Sound. The ships discovered the Chatham Islands and The Snares when their passage was resumed into the central Pacific.

D'Entrecasteaux in the South. A French expedition was sent in September 1791 to inquire into the fate of La Pérouse's ships, which had not been heard of since they left Botany Bay in 1788. Rear-Admiral Joseph Antoine de Bruni d'Entrecasteaux led the expedition in *La Recherche*, with Captain Huon de Kermadec, in *L'Espérance*, as second in command.

The plan of the voyage was, firstly, to explore the entire southern coast of New Holland, and especially Van Diemen's Land, then sail for the Friendly Islands, and then to follow La Pérouse's probable route after leaving Botany Bay. It was thought that La Pérouse intended to explore New Caledonia and the Louisiades, to pass through Torres Strait, and to explore the Gulf of Carpentaria and the northern coast of New Holland.

When *La Recherche* arrived at the Cape of Good Hope, on 17th January 1792, d'Entrecasteaux heard rumours that led him to believe that *La Pérouse* was wrecked in the Admiralty Islands. He therefore resolved to proceed direct to that area; in doing so he decided to water and refresh his crew at Van Diemen's Land. On 20th April that land was in sight and three days later the ships anchored in a harbour, which the admiral named Recherche Bay. For the next five weeks (until 28th May) the Frenchmen carried out careful boat-explorations that revealed in detail the beautiful waterways and estuaries of the area.

D'Entrecasteaux was fortunate in having good officers and scientists, the most important from the exploration point of view being the expedition's first hydrographical engineer, C. F. Beautemps-Beaupré, who is now regarded as the father of modern French hydrography. The work this officer did in the field was excellent and his charts, when published in France as an *Atlas du Voyage de Bruny-Dentrecasteaux* (1807), were very detailed and beautifully engraved. The atlas contained 39 charts, of which those of Van Diemen's Land were the most detailed, and which remained the source of the English charts for many years.

Beautemps-Beaupré, with Lieutenant Cretin, while surveying the coasts discovered that Furneaux's Adventure Bay was on an island and separated from the mainland by a fine navigable channel. On 16th May d'Entrecasteaux commenced to sail the ships through the channel and this was accomplished by the 28th. Port Esperance, the Huon River and other features were discovered, named and charted, the admiral's names being given to the channel and the large island separated by it from the mainland.

On 28th May 1792 the ships sailed into the Pacific to search for *La Pérouse*; on 17th June they arrived off the Isle of Pines, south of New Caledonia. Thence d'Entrecasteaux sailed northward along the western coast of New Caledonia, passed the Solomon Islands along their southern or western coasts, sailed through St George's Channel between New Ireland and New Britain, and on 28th July sighted the south-east coast of the Admiralty Islands. Three days were spent in scrutinizing the eastern and northern coastline, when d'Entrecasteaux decided that the rumours about *La Pérouse* being there were false; his course therefore was directed towards Amboina, where the ships replenished their stores.

Leaving Amboina on 14th October, d'Entrecasteaux made for Cape Leeuwin to carry out his original instructions of searching southern New Holland for *La Pérouse*. On 6th December the land was sighted near Cape Leeuwin, and named D'Entrecasteaux Point. The event was celebrated by feasting and parties; one result of which was that Jean-Marie Marhadour, the smith on board

La Recherche, over-indulged and died next day from an apoplectic fit. The weather was boisterous and the ships failed to find Vancouver's King George III Sound; farther east they penetrated among numerous islands and dangerous shoals, to which they gave the name D'Entrecasteaux Islands—later changed to Recherche Archipelago.

While the Frenchmen were in that dangerous area, on 12th December, a violent storm descended upon them and both ships were nearly wrecked. Fortunately, however, they found an anchorage where they were able to ride out the worst of the gale. Landings were made here on the mainland and the locality was named in honour of Legrand (who sighted the anchorage) and the ship he was on, *L'Espérance*. Beautemps-Beaupré made a hasty survey of the off-lying islands of the archipelago. No water was found and on 18th December the ships continued eastward to the head of the Great Australian Bight; here the coast was found to be more arid and the water position more serious.

On 4th January 1793 d'Entrecasteaux was forced to leave the coast at a position near D'Entrecasteaux Reef and sail direct to Van Diemen's Land. In this decision the French explorer was unfortunate; for, if his examination of the southern coast of New Holland had been continued, he would have made all the geographical discoveries that fell to the lot of Bass and Flinders a few years later. Then, indeed, Freycinet's "Terre Napoléon" would have become a fact.

The ships anchored in Recherche Bay on 22nd January, and a period of five weeks was spent in that area, watering the ships, refreshing the crews and carrying out explorations into both natural history and geography. Beautemps-Beaupré, in company with other officers, surveyed the northern extensions to Storm Bay; the western extension was found to be a mouth of a river and received the name Rivière du Nord—it was renamed Derwent River a few months later by the next visitor, Hayes. As previously stated, the French charts of the area are very detailed and much of the nomenclature bestowed by this expedition is in use today.

On 28th February d'Entrecasteaux sailed from Van Diemen's Land towards the Friendly Islands, sighting New Zealand and the Kermadecs en route. Thence the ships proceeded to New Caledonia, where they anchored at Balade; then the vain search for *La Pérouse* was resumed to Santa Cruz, then along the southern coasts of the Solomon Islands, across to the northern parts of the Louisiades, through Dampier's Passage, along the northern coast of New Britain and the southern coast of the Admiralty Islands, and thence north of New Guinea to the Moluccas.

Many discoveries were made, especially in the present Solomon and Bismarck Seas, where considerable nomenclature still honours many members of that important but unfortunate expedition.

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For details of the later tragic stages of the voyage see D'ENTRECASTEAUX, Joseph Antoine de Bruni.

Hayes Names the Derwent. On 6th February 1793 two ships, the *Duke of Clarence* and the *Duchess*, under Captain John Hayes, sailed from Calcutta on a commercial voyage to northern New Guinea. Circumstances of weather compelled Hayes to sail south of New Holland and call at Van Diemen's Land, where, on 25th April, the ships attempted to anchor in Furneaux's Adventure Bay. They failed to enter that bay, but were able to enter the northern entrance to D'Entrecasteaux Channel and anchor in North-west Bay.

Hayes had no knowledge of the fact that only three months previously d'Entrecasteaux's expedition had explored and charted in detail all the bays and islands in the area. Nor was he aware that Captain William Bligh in H.M.S. *Providence*, with the *Assistant*, had anchored in Adventure Bay in February 1792 and carried out surveys. Accordingly, Hayes remained in the area until 9th June, meanwhile making careful exploratory journeys in the boats; he gave English names to all the places lately named by the French, selecting them principally in honour of his acquaintances and fellow-officials in the East India Company.

The ships were moved into the northern river when it was found, and were anchored in a position which Hayes named Risdon. To the river itself he gave the name Derwent, or Derwentwater. (As Hayes explored the river to its higher reaches, his name was retained. Hayes also named Betsy Island (after a ship in India), at the entrance of the present port of Hobart.

Hayes's track to New Guinea also partly followed that of d'Entrecasteaux. He called at New Caledonia, then made for the Louisiades, where he explored along the southern coast, then retraced his course and anchored at Rossel Island. For further details of his voyage see HAYES, Sir John.

Minor Voyages. With the growth of sealing and whaling, some exploration was undertaken by vessels engaged in these industries, during various wide cruises in Australasian waters. Important geographical discoveries were made by some of them, especially in New Zealand and the sub-Antarctic (see HEARD ISLAND; MACQUARIE ISLAND).

In 1798 Captain Reid in the *Martha* discovered King Island, Bass Strait; in January 1801 Captain Black (*Harbinger*) named it and a few days later it was seen by Captain Buyers in the *Margaret*. Captain Ebor Bunker in the *Albion* made useful discoveries, while American captains named Delano, Pendleton, and Fanning, as well as others, also were active in Bass Strait and near Kangaroo Island. Some present-day nomenclature in those areas records their visits. Minor hydrographic information continued to be received from whalers, sealers and other sea-captains during the rest of the period covered by this article.

BASS AND FLINDERS

When on 25th September 1795 H.M.S. *Reliance* entered Port Jackson, she carried among her officers George Bass as surgeon and Matthew Flinders as one of the midshipmen. Seven weeks after their arrival these two officers began a series of explorations that led to the discovery of a strait between New South Wales and Van Diemen's Land.

The "Tom Thumbs" Voyages. Bass had brought with him in the *Reliance* a small boat which he called *Tom Thumb*; in this he and his friend Flinders explored Botany Bay and George's River, with such success that land expeditions were sent out by Governor Hunter to explore the country westward. On the return of the *Reliance* from Norfolk Island the two friends obtained the use of another small boat built in the colony, somewhat larger than the first but also named *Tom Thumb*.

In March 1796 Bass and Flinders, with Bass's servant William Martin, set out in the second *Tom Thumb* to carry out a coastal exploration south of Botany Bay in search of a river-mouth reported not far away. During the night of 25th March the southerly current carried them beyond the present Bulli, and a head wind prevented their return; they were compelled to run south until they obtained a lee under Red Point (named by Cook). Here they landed, but their stores were thoroughly soaked in going through the surf.

Some aborigines gathered around the stranded voyagers and were inclined to be aggressive, whereupon Flinders, to divert them, produced a pair of scissors and persuaded them to have their hair and beards cut, while Bass dried the stores and made the boat ready to resume the voyage. Before they could do this, they had to replenish their supply of water. A rivulet was found close by and inland they could see a large expanse of water, which they named Tom Thumb's Lagoon. This has since been renamed Lake Illawarra, but for some years it was called Big Tom Lagoon. The name is clearly shown on Flinders's chart against the position of the present Lake Illawarra. The present Tom Thumb Lagoon in Port Kembla was not the lagoon noted by Flinders.

On their way back they encountered bad weather, and only with difficulty prevented the small boat from being swamped, in consequence of which the small inlet where they at last found shelter was called Providential Cove; Flinders stated that the native name was Watta Mowlee; it is now known as Wattamolla and is a part of Sydney's National Park. On 1st April they examined Port Hacking, previously discovered by and named after Henry Hacking (*q.v.*), the Sydney pilot. On the evening of the following day the *Tom Thumb* arrived safely in Port Jackson.

Wreck of the "Sydney Cove". The ship *Sydney Cove*, from Calcutta to Port Jackson, developed a leak and was beached at a spot afterwards termed

Preservation Island, in the Furneaux Group, on 8th February 1797. Seventeen of her crew embarked in the longboat and attempted to reach Sydney for assistance. However, the boat capsized near Cape Everard, and the men were forced to continue their journey overland along the coast. The party (two officers, three white seamen and twelve lascars) began its journey on 15th March; they experienced almost incredible hardship, but made one of the most notable overland journeys in the story of Australian exploration. The chief officer, Hugh Thompson, and the supercargo, W. Clarke, made discoveries of rivers and inlets. On 15th May three survivors of the party (including Clarke) had reached a point about 15 miles south of Botany Bay, where they burnt coal to attract the attention of some fishermen, who brought them to Sydney.

Hunter dispatched the schooner *Francis* (the first vessel launched in Sydney—on 24th July 1793) and the sloop-rigged boat *Eliza* to the rescue of those who had been left on Preservation Island; what cargo could be rescued was taken on board and a party of six of the crew volunteered to remain behind to guard the rest. The *Francis* and *Eliza* sailed for Sydney on 21st June and the *Francis*, after a stormy passage, arrived 15 days later; but the *Eliza*, which had separated from her consort soon after leaving Preservation Island, was never heard of again.

In August 1797 Hunter sent Bass in a whaleboat to investigate Clarke's reported discovery of coal south of Botany Bay. Clarke went along to indicate the position, and, about 20 miles south of that bay, wide seams of good coal were found in a cliff; the locality therefore received the name of Coalcliff. Here, also, were found the remains of some of the castaways who had died of exhaustion, including those of the chief officer, Thompson.

Shortland at Hunter River. In the following month the *Cumberland*, the best boat in the settlement, was seized by part of her crew while on the way to the Hawkesbury. It was thought that the escapees, like the Bryants, would make their way towards Timor, but, in order to be certain, two boats were sent in pursuit, one north and one south along the coast. The former boat, under Lieutenant T. G. Shortland, found traces of the escapees at Port Stephens, but could continue the pursuit no further. On the return journey, at a spot about 30 miles southward along the coast, Shortland entered a river and found an abundance of good coal near the water's edge. The river was named after Hunter. Later, it became revealed that the runaway Bryant party had been at the spot six years earlier (1791).

Penetration of Bass Strait. Bass now asked Hunter if he could make a more extensive voyage in a whaleboat to the wreck of the *Sydney Cove* to investigate the survivors' reports regarding that

area. Flinders, who had just been promoted lieutenant, could not be spared from the *Reliance* (then undergoing a refit), and thus on 3rd December (1797) Bass set off without him; he had six seamen and provisions for six weeks.

On the way south Bass named many features; actually they were not new discoveries, as the overland party from the wreck of the *Sydney Cove* had traversed them on their way north. On the 7th he named the Shoalhaven River; on the 10th he entered Jarvis Bay; on the 17th he entered and named Twofold Bay; and on the 20th he passed Cape Howe. When he was beyond Point Hicks (now known as Cape Everard) he was on a completely unknown coast.

On 2nd January 1798 Bass sighted a promontory which he first named Furneaux Land and later renamed Wilson Promontory. He then commenced to cross over to the wreck of *Sydney Cove*, but bad weather forced him back to shelter near Wilson Promontory. Smoke was seen from one of the islands near the promontory, and Bass found a party of seven escaped convicts. Three months previously a party of 14 convicts had stolen a boat from Sydney in an attempt to reach the *Sydney Cove*; they hoped to repair and float the wreck and sail for some destination where they would be safe from the law. They were unable to find Preservation Island, and landed on an island near the promontory; but, as the stock of food was low, seven deserted with the boat one night while the others were asleep. These convicts were the first Englishmen to penetrate into the strait, and (although they did not recognize it as a strait) they may be said to have been in a sense the discoverers of the area.

Bass gave them what assistance he could and promised to call on his return. He proceeded westward and on 5th January he discovered and entered Western Port—so named by Bass because of its relative position to the other known harbours of the colony. Twelve days were spent in exploring the port.

Bad weather was experienced on the return voyage, but the boat sheltered behind Cape Liptrap. The strong westerly seas and swell convinced Bass that he had discovered a strait opening into the ocean south of New Holland. On reaching Wilson Promontory, the seven convicts were removed from the island; five were landed on the mainland and given a musket and other assistance to enable them to return to Sydney along the coast. They were never heard of again. The remaining two convicts were taken back in the whaleboat. On the return voyage, Corner Inlet was entered and named, and several other landings were made.

The weather continued bad, but the boat was got back safely to Sydney on 25th February. Hunter, also convinced that a strait existed, named it in honour of Bass.

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Meanwhile, on 1st February, Hunter had sent the *Francis* again to the wreck of the *Sydney Cove* to bring back the rest of the cargo and the remaining survivors. Flinders volunteered to go with the schooner; his journal gives interesting information on the Furneaux Group and much of the nomenclature in that vicinity is due to him. The westward-setting tides also convinced Flinders that a strait existed north of Van Diemen's Land. The *Francis* returned to Sydney on 9th March 1798.

The "Norfolk" in Bass Strait. The *Norfolk*, a sloop of 25 tons, was built at Norfolk Island and arrived in Sydney on her maiden voyage in June 1798. Hunter fitted the sloop out for a voyage to Bass Strait, to confirm that discovery by sailing through it and circumnavigating Van Diemen's Land. Flinders was appointed in command, and with Bass and eight men, and provisions for three months, he left Sydney on 7th October 1798. The plan was to sail to the Furneaux Group, then westward along the north coast of Van Diemen's Land.

On 3rd November the estuary of the Tamar was discovered and entered (Hunter called it Port Dalrymple after the hydrographer Alexander Dalrymple). Here the explorers spent 17 days examining the vicinity and port, which they considered very suitable for settlement. From 20th November until 9th December they remained on the north coast, charting and naming features. On the latter day they noted the land trending south, and, as a long swell was coming in from the west, they knew they had passed through the strait. The forbidding headland that marks that point they named Cape Grim.

Bass and Flinders then hastened down the western coast of Van Diemen's Land. (Every explorer and surveyor has likewise hastened down it ever since, for that coast is still largely unexplored.) On 21st December they entered the Derwent River and Bass spent Christmas Day climbing the present Mount Wellington. On 3rd January 1799 they left the Derwent and arrived in Port Jackson nine days later.

Flinders in the North. Hunter then sent Flinders to carry out further exploration in Cook's Glass House Bay and to the northward; he left in the *Norfolk* on 8th July 1799, this time without Bass who had gone to England. The voyage was planned in the hope of discovering large rivers, and by means of them penetrating into the interior. Flinders did not examine the coast closely enough, for he missed the present Clarence River, although he anchored near its mouth and named the indentation Shoal Bay. Nor were any other rivers found; even when he had entered Glass House Bay (on 14th August) and spent 15 days there, he failed to find the present Brisbane River.

Flinders named many of the features noted, including Pumice Stone River (now Strait), Skirmish Point (after a slight affray with aborigines), and

Moreton Island. As mentioned earlier, in spelling the name Cape Moreton Flinders wrongly followed Hawkesworth's text instead of the chart in Cook's voyage, and instead also of the correct rendering (Morton) on the charts of the east coast published by Dalrymple. When Flinders produced his own series of charts the incorrect rendering (Moreton) was still retained, and it has so remained ever since.

The next large opening examined by Flinders was to the west of Cook's Sandy Cape; he passed this point on 2nd August and spent six days in charting the coast of Hervey Bay. The *Norfolk* then returned to Sydney, arriving on 20th August.

GRANT AND MURRAY

Captain John Schanck, R.N., one of the commissioners of the transport board, invented sliding keels (centre-boards) and the *Lady Nelson* (*q.v.*), a small brig of 60 tons burden, was built upon his plans. In 1799 she was assigned for survey work on the coast of New South Wales.

The "Lady Nelson" in Bass Strait. Sailing from Portsmouth in March 1800, under the command of Lieutenant James Grant, the *Lady Nelson* had a successful passage out and Grant sighted the coast of New Holland on 3rd December. He named Capes Northumberland and Banks and Mounts Schanck and Gambier, and then, as the *Lady Nelson* passed through Bass Strait—the first vessel to do so from the west—a running survey was made of the coast of the present State of Victoria.

Grant, as discoverer of this small stretch of coastline, named many of the features (more than 20 in all), including Capes Bridgewater, Nelson, Liptrap, and Otway (originally Albany Otway), as well as Portland Bay and most of the islands in the vicinity of Wilson Promontory. The *Lady Nelson* arrived in Sydney on 16th December.

On 6th March 1801 Governor King sent the *Lady Nelson* to make a further survey of the coastline between Cape Otway and Wilson Promontory, which Grant had not sighted during his previous voyage. The *Bee*, a colonial vessel of about 15 tons (manned by convicts), was ordered to accompany the *Lady Nelson* as tender, but she was so unseaworthy that after a few days Grant ordered her captain to return to Sydney. Francis Barrallier—afterwards well-known in land exploration—and George Caley the botanist accompanied Grant. No new discoveries were made; the vessel visited both Jervis Bay and Westernport (now spelt thus), and returned to Sydney on 14th May.

Survey of Port Hunter. Soon after that the *Lady Nelson* was ordered to convey Lieut.-Colonel Paterson to the Hunter to make a survey there. The *Francis* went in company in order to bring back a cargo of coal. Dr John Harris, Francis Barrallier, and J. W. Lewin the artist were also sent to assist Grant and Paterson with the survey. On 12th June

LINKED BY THE SEA



The USA Gallery
in the
Australian National
Maritime Museum

OPENING 1990
DARLING HARBOUR, SYDNEY



News Release

Australian National Maritime Museum

13A Union Street Pyrmont NSW 2009 Australia
GPO Box 5131 Sydney NSW 2001 Australia
Telephone: (02) 552 7777 Facsimile: (02) 552 2318

BATTLE OF THE CORAL SEA CONFERENCE, SYDNEY, 7-10 MAY 1992

The Australian National Maritime Museum will hold its first major conference from 7 to 10 May 1992, to commemorate the 50th anniversary of the Battle of the Coral Sea.

The conference and a temporary exhibition, to be held in the newly-opened museum in Sydney's Darling Harbour, will be part of an Australia-wide series of Coral Sea commemorative events during the first ten days of May 1992.

Only five months after the opening of the Pacific War, the Battle of the Coral Sea was fought between ships and aircraft of the Imperial Japanese Navy against units of the US Navy and Royal Australian Navy from 4 - 8 May, 1942. The battle took place in the Coral Sea, off the coasts of Queensland and New Guinea.

Following Japanese air raids on Darwin, it was the first time since British colonisation that Australians lived in real fear of imminent enemy invasion. It was the first naval battle fought entirely by aircraft, without the ships ever sighting each other. Strategically, it was the first check to the Japanese advance in World War II.

Speakers from Australia, the USA and elsewhere will focus on the development of naval aviation, the battle itself, its strategic significance, its effect on Australians, as well as its symbolic and political meaning for US-Australian bilateral relations then and since.

The conference will appeal to professional and amateur historians, serving Naval personnel, veterans of World War 2, military buffs and people interested in the development of Australia's international relations in the Pacific.

Both the conference and the exhibition are being sponsored through the USA Bicentennial Gift, and form part of the public programs of the USA Gallery, which commemorates Australian-American maritime relations.

The full conference program will be available later this year. For further details contact:

*John Wade,
Senior Curator, USA Gallery
Australian National Maritime Museum
GPO Box 5131
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Telephone: 02 552 7777
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SPEECH NOTES FOR BRUCE STANNARD - USA GALLERY
20 October 1991

The USA Gallery is the USA's major Bicentennial Gift to Australia, and our largest gift from any nation.

Ambassador Sembler's predecessor, Ambassador Bill Lane, brought enormous personal interest and enthusiasm to the task of getting the gift through The Hill in Washington. Melvin and Betty Sembler have likewise shown great support for the Museum and this country.

The US\$ 5 million gift was handed over directly to the Museum to develop a permanent exhibition showing 200 years of Australian-American maritime relations - which stretch back to the three Americans on board Cook's *Endeavour* in 1770.

The exhibition gallery around you has been developed by Australian curators, designers and builders. It would not have been possible without the support of the American museum community, the US Information Agency, the Navy, the US Embassy and the Consulate.

The brig *Philadelphia* was the first foreign trading vessel to reach Sydney, on 1 November 1792, with a cargo of meat and liquor.

Captain Patrickson of *Philadelphia* was in Cape Town in July 1791, and learned about Sydney's need for supplies from Lt Governor King, heading for Sydney in HMS *Gorgon*.

Patrickson returned to *Philadelphia* and in early April 1792 sailed for Sydney with 13 hands, and a mixed cargo:

- 588 barrels of beef
- 3 hogsheads hams
- 1 tierce of smoked beef
- 2 hogsheads tobacco
- 3 casks and 2 kegs of manufactured tobacco
- 3 puncheons rum
- 20 quarter casks of Teneriffe wine
- 40 cases gin
- 6 casks porter (beer)
- 33 cases shrub (rum and lemon juice)
- 12 hampers cheese
- 6 casks butter
- 20 barrels tar
- 11 barrels pitch
- 1 pair mahogany card tables
- 3 quarter casks particular wine

Philadelphia was smaller than *Endeavour* - 22 metres (73 feet) long, 162 tons.

Australia has had US diplomatic representation for over 150 years the last 50 at Ambassadorial level. The first US consul, J.H. Williams, (buried at St Thomas' North Sydney) arrived in Sydney on a summer's day in January 1839.

He was on board the barque *Tartar* from Boston, which landed the first shipment of ice in Australia.

Tartar sailed from Boston in September 1838 with 400 tons of ice insulated with sawdust. 250 tons survived the 128-day voyage, and was soon being advertised for sale for "cooling wine, cream, butter, water and meat". The shippers thoughtfully sent out 22 refrigerators, and a piano.

Our USA Gallery is now being fitted out with exhibits. In the corner is the flag from the barque *Catalpa* of New Bedford, Massachusetts.

Irishmen from Boston hired the whaleship *Catalpa* to rescue fellow countrymen, held prisoner in Western Australia in 1876.

The prisoners rowed out to *Catalpa*, with the police in pursuit on board the steamer *Georgette*. The police caught up to American whaler.

On board, Captain Anthony pointed to his flag : "I am on the high seas. That, the American flag, my flag protects me. If you fire on this ship, you fire on the American flag". That flag is here, lent to us by the National Museum of Ireland.

Computer-based interactive and audiovisual displays incorporate the latest American technology. On one interactive that is set up tonight, you can be the captain of a trading ship, buying and selling commodities on a voyage to Australia.

There will be more touch screen interactives and audiovisuals on surfing and defence, as well as a comprehensive historical "Timeline". The videowall, with nine 41-inch monitors, will be a star attraction.

The US Government has not been our only supporter. State Street Bank was the first corporation to make a gift to the exhibition, a fine model of the 1850s clipper *Sovereign of the Seas*, from the collection in its Boston head office.

The Gallery is a national cultural gift in the tradition of France's gift to the USA on its Centennial in 1876 - the Statue of Liberty. As a gallery commemorating the links between two nations, it is unique in Museums.

We can all be very proud that this experimental idea is coming to fruition in such a superb institution as the Australian National Maritime Museum.



MEDIA SUPPORT AND INFORMATION

The Australian National Maritime Museum has appointed consultants Schofield Smith Partners to assist with the opening events and media campaign.

For media information or images, to arrange interviews with Museum experts or to inspect the Museum's Collection contact:

Helen Tribe and Phillip Howes
Schofield Smith Partners
Phone 02 332 2955
Fax 02 332 2925

The Australian National Maritime Museum's Public Relations Officers are Fiona Halmarick and Bill Richards.

Phone 02 552 7777
Fax 02 552 2318

Regular news updates will be produced and specialist stories will be issued as opening date approaches.

The Museum will open to the public at 10 a.m. on 30 November with an Opening Weekend Festival at Darling Harbour and a Harbour Regatta to be held on Saturday 30 November and Sunday 1 December. The Opening Festival will provide a feast of picture and story opportunities. A Festival and Regatta program of events and spectacles will be issued.

Please let us know if you have any special requests.



THE
AUSTRALIAN NATIONAL
MARITIME MUSEUM

MEDIA KIT



MEDIA KIT CONTENTS

- 1. Introduction**
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- 5. The Museum Collection**
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- 7. Home to the Collection**
- 8. Historical Fleet Service Base**
- 9. Bicentennial Gifts to Australia**
The USA Gallery
Akarana
Kathleen Gillett
- 10. The Chairman - Peter Doyle, AM**
- 11. The Director - Dr Kevin Fewster**
- 12. Opening Celebrations**



News Release

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A NEW NATIONAL COLLECTION FROM THE BEGINNING

In 1975 the Pigott Committee of Inquiry on Museums and National Collections recommended the establishment of a national maritime museum for Australia. A 1983 Government study recommended Sydney as home for the Museum. In 1984 the NSW Premier and the Commonwealth Minister for the Arts, Heritage and the Environment announced plans for the Museum, to be built by the Commonwealth on land provided by the State Government at Darling Harbour.

In 1985 the Commonwealth allocated \$30 million for the project as part of its commitment to Australia's Bicentenary celebrations, which were to be held in 1988. A Secretariat was set up in Sydney to co-ordinate the development of the Australian National Maritime Museum in conjunction with an Advisory Committee chaired by Mr Alex Dix AO. Architect Mr Philip Cox AO was commissioned to design the building, which was constructed by the Darling Harbour Authority. Construction began in 1986 and in June 1987, Prime Minister Bob Hawke officially unveiled the foundation plaque.

The first staff members were recruited in 1986, and work began to assemble the National Maritime Collection and to develop the exhibitions. Staff initially worked from temporary offices and storage areas before consolidation in the present Pyrmont offices.

During 1988 the Museum received Bicentennial gifts to Australia - from the United States of America, New Zealand, Norway and Czechoslovakia.

Until December 1990 the Museum was a unit of the Arts, Film and Cultural Division of the Department of the Arts, Sport, the Environment, Tourism and Territories (DASETT) and was guided by an Interim Council. Mr Peter Doyle, AM was appointed Chairman of Interim Council in March 1988.



A NEW NATIONAL COLLECTION CONT'D

The Australian National Maritime Museum Act 1990 established the Museum as a Commonwealth Statutory Authority. The responsible Minister is The Hon. David Simmons MP, Minister for the Arts, Tourism and Territories, who announced the appointment of the present Council in December 1990.

The completed building in Darling Harbour was handed over to the Museum in October 1990. Fitout and exhibition installation began immediately for opening in November 1991.

The role of the Council of the Australian National Maritime Museum is to direct the functions and operations of the Museum as an independent commonwealth statutory authority.

Noted Sydney restaurateur Mr Peter Doyle AM is Council Chairman. Director of the Museum is Dr Kevin Fewster, also a member of Council.

Other Council members are:

Dr Alan Bartholomai, (QLD)

Dr Bartholomai is Director of the Queensland Museum and has been a Member of the Committee on Taxation Incentives for the Arts and a Member of the National Cultural Heritage Committee.

Dr Jean Battersby AO, (NSW)

Dr Battersby is a distinguished arts administrator and advisor to Commonwealth Governments on cultural and heritage affairs. Previous Commonwealth positions held include Chief Executive officer of the Australia Council.

Professor Geoffrey Bolton AO, (QLD)

Professor of History at the University of Queensland, Professor Bolton is a member and former Chairman of the Maritime Archaeology Advisory Committee, Western Australian Museum, and a long-standing member of the Australian Netherlands Committee on Dutch Shipwrecks.

Ms Sue Calwell, (VIC)

Ms Calwell is Executive Director of the Melbourne Tourism Authority with extensive tourism and promotional experience.

Ms Kay Cottee AO, (NSW)

Ms Cottee, boatbuilder and solo circumnavigator, is well known as the first woman to sail solo around the world. A fund raiser for the Life Education Program in 1989 and 1990, Ms Cottee was named Australian of the Year in 1988.

A NEW NATIONAL COLLECTION CONTD

Captain John Evans AM, (NSW)

Captain Evans is a company director and former Chairman of the Maritime Industry Association of Australia. He has been advisor to the Government on maritime affairs.

Rear Admiral David Holthouse AO, RAN (NSW)

Rear Admiral Holthouse is Flag Officer of Naval Support Command. His career has included submarine, frigate and aircraft service and command of the training establishment HMAS Nirimba. Rear Admiral Holthouse has also served as Australian Naval Attache in Washington DC, Naval Advisor in Ottawa, Canada and honorary aide-de-camp to His Excellency the Governor General of Australia.

Mr Michael Kailis, (WA)

Mr Kailis has been involved in the seafood industry for over 40 years with experience in catching to processing, local retail and export marketing.

Mr Patrick Moss, (NSW)

Mr Moss has had a long career in the shipping industry, serving major shipping lines afloat and is well known in shipping circles.

Mr Bruce Stannard, (NSW)

Senior staff writer for The Bulletin, Mr Stannard is also well known as the author of a number of books on maritime subjects, including the America's Cup and Sydney yachting history.



News Release

Australian National Maritime Museum

13A Union Street Pyrmont NSW 2009 Australia
GPO Box 5131 Sydney NSW 2001 Australia
Telephone: (02) 552 7777 Facsimile: (02) 552 2318

HOUSING THE COLLECTION

Home to the nation's maritime collection is the dramatic white landmark building on the waterfront at Darling Harbour.

Designed by Philip Cox AO of Philip Cox Richardson Taylor and Partners Pty Ltd, the ten-storey high Australian National Maritime Museum building has intentional echoes of the Sydney Opera House.

"The Museum's roof structure is suggestive of a large sailing ship under full sail with its billowing forms hovering over the harbour itself," Cox said.

"Museums are essentially repositories for national treasure and I believe they need to be enjoyed externally as public art."

"The exposed structure gives sense to the industrial nature of maritime history. The building does not attempt to trivialise the utilitarian and industrial artefacts.

"All museums should show objects in an interpretative manner so that history, beauty and reason can be communicated to the observer, Cox added.

The building features a soaring steel roof-line rising 38 metres and occupies 6,500 square metres of the 2.2 hectare waterfront site.

The Museum has 4,000 square metres of indoor exhibition space with a large forecourt area and two 90 metre long finger wharves to provide berths for the Museum's fleet of historical vessels. The Museum's floating collection will stand beside the wharves.

Four galleries house the permanent exhibitions, including the largest which has been named for the Museum's principal corporate sponsor - the ANZ Tall Gallery - and the United States of America Gallery which is funded by a \$US5 million Bicentenary gift from the USA.



HOUSING THE COLLECTION CONT'D

On-site facilities provide a gallery for temporary and visiting exhibitions, an education suite, the 200-seat ANZ Theatre, the Cunard Members Lounge, Dr Wall Gentle Boardroom, a Museum shop and waterfront restaurant.

Constructed for the Darling Harbour Authority by Leighton Contractors under a 1986 agreement between the Commonwealth and NSW Governments, the building is already a landmark of the city's waterfront.

Construction delays, then disagreement between State and Commonwealth Governments over building costs, delayed the project. After handover of the empty shell to the Australian National Maritime Museum in October last year, the Museum instantly commenced a 12-month \$18 million fitout out to house and display the Museum's Collection.

The Museum's internal fitout was designed by Denton Corker Marshall Pty Ltd in conjunction with the Museum's Design Staff and constructed by Kell and Rigby Pty Ltd.

The interior of the USA Gallery was designed by Burley Katon Halliday with construction by A.W. Edwards Pty Ltd.



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MUSEUM FLEET MANAGEMENT BASE BERRY'S BAY NORTH SYDNEY

The Museum's historic fleet is managed from a waterside base that is itself a significant historic site with a fascinating maritime past.

The Fleet Management Base at Berry's Bay, North Sydney is a Commonwealth Government site famous as Sydney's Quarantine Depot.

Before being occupied by the Museum in 1988, the depot was used by the Department of Primary Industry as a 'non-dairy quarantine depot'. It was used earlier by the Department of Health as a ship fumigation centre.

Originally the Depot provided launches and crew to ferry doctors out to ships for health and Customs inspections and rat control.

Today, visiting ships are sent a crew health questionnaire by radio and inspections take place when a ship has berthed.

Berry's Bay is named after Scottish surgeon Alexander Berry who built jetties for his ships coming from the Shoalhaven River in NSW, laden with produce. Berry's Bay was a thriving commercial area and site of numerous boatbuilding yards.

Today Berry's Bay is a peaceful haven on Sydney Harbour which provides mooring for visiting overseas yachts.

The fleet management site has two cottages built for the coxswain and staff in 1917-19. The cottages are now named Pasteur and Jenner after a succession of quarantine launches operating from the depot.



MUSEUM FLEET MANAGEMENT BASE BERRY'S BAY NORTH SYDNEY CONT'D

The picturesque buildings are set up the hill and overlook an historic garden with spectacular palms planted in the 1920s.

On the water's edge is Sydney's oldest remaining coal bunkers which also stored cyanide for rat fumigation to combat the constant threat of bubonic plague.

Today, the Museum uses the base with its wharf and slipway to carry out maintenance, including below water-line work, on its fleet of historic vessels.

Fleet conservation, and preparing vessels for display at the Museum, is based on adherence to a conservation plan developed for each vessel.

Among the decisions to be made are whether a vessel is to be *preserved* in the condition that it was acquired, *restored* to a previous condition using existing materials or *reconstructed* to a certain condition using some new materials. For example, the ex-RAN patrol boat *Advance* is preserved in the state it was at decommissioning in 1988. The 1903 cuta boat *Thistle* had been converted to a houseboat and was restored and reconstructed by the Museum to illustrate its earlier significance as a fishing boat.



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A GIFT FROM NEW ZEALAND THE RACING YACHT AKARANA THE OLDEST VESSEL IN THE MUSEUM'S FLEET

The New Zealand racing yacht *Akarana* took part in Australian centennial regattas in 1888. One hundred years later, it returned to Australia as a gift from the people of New Zealand to celebrate 200 years of British settlement in this country.

In 1888, *Akarana* sailed to celebrated victories in the Victorian International Regatta on Hobson's Bay, Melbourne. *Akarana* also raced in Sydney and won the National Regatta on Australia Day (then known as Anniversary Day) 1889, taking home the prize of two cases of Moet et Chandon champagne and 20 pounds.

In 1987, the old yacht was located in Sydney and returned to New Zealand for restoration. Traditional methods and materials were used when possible and much of the original kauri hull was preserved.

The fully restored 39 foot gaff cutter is now the oldest boat in the Australian National Maritime Museum's fleet. It is held as a fine example of a specialised type of racing cutter of the period and a symbol of the long, friendly but often fierce sailing rivalry between Australia and New Zealand.

The name *Akarana* derives from a Maori word for Auckland, where the yacht was launched in 1888. It was designed and constructed by Robert Logan, specially for the Centennial Regatta. Logan's family of Scottish boatbuilders became recognised as the leaders in their industry in late 19th century New Zealand.



THE RACING YACHT AKARANA CONT'D

The yacht was shipped to Melbourne on the steamer *Nemesis*, accompanied by Logan and his racing skipper Jack Bell.

In races of only five or six entrants and sailing under the burgee of the Auckland Yacht Club, *Akarana* was competing for "the honour of New Zealand" against yachts and crews from Melbourne, Sydney and Tasmania.

Logan sold *Akarana* to Sydney chemist John Abraham who registered it with the Royal Sydney Yacht Squadron and used it for pleasure cruising around Sydney Harbour. The yacht remained in Sydney for the next 100 years, passing through several owners and many changes including the loss of its lovely counter stern.

In January 1988 *Akarana* was welcomed back to Australia at a Maori dawn ceremony at the Royal Sydney Yacht Squadron, restored to the Logan lines of 1888.



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**FIRST SYDNEY HOBART RACER
A BICENTENNIAL GIFT FROM NORWAY**

Norway's official Bicentennial gift to Australia, the double-ended ketch *Kathleen Gillett*, celebrates a fascinating link between the two nations.

Last century, Colin Archer, a Norwegian of Scottish descent, was a pioneer farmer in Queensland before returning to his homeland in 1861 to become Norway's best-known naval architect. Archer was renowned for his seaworthy fishing, rescue and pilot boats.

The beamy 13.18m ketch *Kathleen Gillett* was built in the 1930s for Sydney artist and sailor Jack Earl and his wife Kathleen by Charles Larsen. He worked from Archer drawings to develop what became a world cruising yacht worthy of the Norwegian designer.

It was home to the Earl family in the War years, and used in this period for NSW coastal patrol.

On 26 December 1945 *Kathleen* sailed in the first Sydney Hobart Yacht Race - an event organised by Earl and his friends at the newly formed Cruising Yacht Club of Australia.

In 1947 Earl and his crew finally set sail on their round-the-world cruise. It was an 18-month adventure, and with it *Kathleen* became the second Australian yacht to complete the epic voyage.

After Jack Earl sold *Kathleen* in the 1950s, the ketch sailed in the island trade in Torres Strait and was used for crocodile hunting around Bougainville and the Solomon Islands.

In 1967, *Kathleen* was converted back to a cruising yacht and sailed again in the Sydney Hobart Race.



FIRST SYDNEY HOBART RACER CONT'D

Much changed from original design, *Kathleen* was located in Guam in 1987 and purchased by the Norwegian Government as a Bicentennial gift for the people of Australia.

Careful restoration by the Norwegian-descended Carl Halvorsen to plans based on photographs and conversations with Jack Earl has returned *Kathleen* to the history-making ketch that sailed in Australia's great ocean adventure, the first Sydney Hobart.

Kathleen Gillett will be handed to the Museum by the Ambassador for Norway Mr Per Haugestad on Friday 15 November. The Minister for the Arts, Tourism and Territories, David Simmons will receive *Kathleen* on behalf of the people of Australia.



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**PETER DOYLE, AM
CHAIRMAN OF
THE AUSTRALIAN NATIONAL MARITIME MUSEUM**

Australian National Maritime Museum Chairman Peter Doyle, AM, is a prominent member of the fishing and restaurant industries of New South Wales.

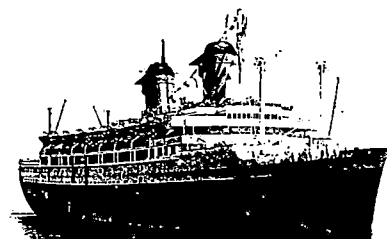
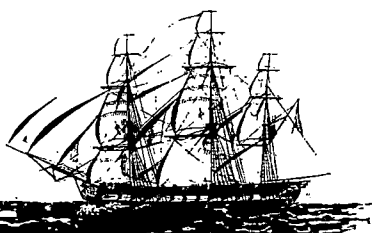
A former member of the NSW and Australian Fishing Industry Councils, he continues to serve this industry as Consumer Representative for the NSW Fish Marketing Authority.

Peter Doyle is better known to the public as a restaurateur and Chairman of the Doyle Group of Companies and Doyles Seafoods Pty Ltd.

Mr Doyle is also a board member of the TAFE College Food School at Ryde, a former Chairman of the National Aquarium Advisory Committee, former Deputy Mayor and Alderman of Randwick Council and a member of the National Tourism Advisory Board.

Peter Doyle was born in 1932 and has five children and six grandchildren. He was awarded the Order of Australia in 1988 and named Father of the Year in 1990.

Peter Doyle has been Chairman of the Australian National Maritime Museum since mid 1988.





News Release

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DR KEVIN FEWSTER DIRECTOR OF THE AUSTRALIAN NATIONAL MARITIME MUSEUM

Born in Perth, Western Australia in 1953, Dr Kevin Fewster graduated with Honours from the Australian National University in 1976 and was awarded his Doctorate in History from the University of New South Wales in 1980.

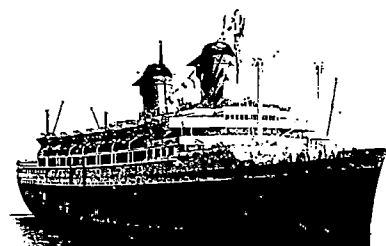
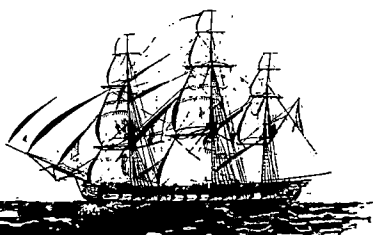
In January 1989, Dr Fewster was appointed Inaugural Director of the Australian National Maritime Museum. The Museum, on the waterfront at Darling Harbour in Sydney, is Australia's only collecting institution outside Canberra. Dr Fewster's mission is to explain and display Australia's rich maritime past both to Australians and international visitors.

Dr Fewster began his career as a university academic. Between 1976 and 1984, he taught history at the Royal Military College, Canberra and Monash University in Melbourne.

In 1984, Dr Fewster was appointed Inaugural Director of the South Australian Maritime Museum. Under Fewster's direction the Museum received several prestigious awards including the South Australian Museum of the Year in 1987, National Tourism Award and Australian Museum of the Year in 1988.

In addition to Dr Fewster's institutional awards, he was been awarded an Esso Arts Scholarship to study museums in North America and Europe. He has published two books on World War I and numerous articles in various academic journals and magazines. He has also assisted in the production of two films, one of which, 'Stop the Drop', won a United Nations Association Media Peace Prize in 1983.

Dr Fewster is a member of the Executive Council of the International Congress of Maritime Museums (ICMM) which is the world organisation for maritime museums.



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PRESIDENTIAL REMARKS: NATIONAL MARITIME MUSEUM
SYDNEY, AUSTRALIA
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[Acknowledgments]

I am delighted to take part in dedicating this gift from the people of the United States to the people of Australia -- the USA Gallery of the Australian National Maritime Museum. President Reagan announced the gift in 1988, to celebrate the bicentennial of Australia's settlement by Captain James Cook. This year, it happens, marks the two hundredth anniversary of the arrival of the first foreign trading ship in Sydney -- an American vessel called the Philadelphia.

Never was a ship more aptly named. Brothers we are, and brotherly love has linked the Australian and American people now for two centuries. Our common ancestors endowed us with language and culture, the rule of law, a spirit of enterprise and a passion for freedom that we still share today.

Australians and Americans have been together for many a maritime adventure -- in peace and in war, in commerce and in sporting competition. Visitors to this gallery may see historical displays on the three Americans who were among the crew of Captain Cook's Endeavour crew on its voyage to Australia in 1770. Interactive audio-visual displays allow visitors a unique glimpse into life aboard a 19th century trading ship.

Other displays commemorate the common courage Australian and American naval forces showed half a century ago in the fateful battles of Midway and the Coral Sea.

Fraternal ties of culture and commerce between our nations have never been stronger than now. In this spirit, and in this anniversary year, I am honored to take part in opening the USA Gallery of Australia's National Maritime Museum.

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