

Paper 1

The Discovery and Mapping of Australia's Coasts: the Contribution of the Dutch, French and British Explorer-Hydrographers

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ABSTRACT

This paper focuses on the mapping of Australia's coasts resulting from the explorations of the Dutch, French and English hydrographers. It leaves untouched possible but unproven earlier voyages for which no incontrovertible evidence exists.

Beginning with the voyage of the Dutch yacht, *Duyfken*, in 1605-6 it examines the planned voyages to the north coast and mentions the more numerous accidental landfalls on the west coast of the continent during the early decades of the 1600s. The voyages of Abel Tasman and Willem de Vlamingh end the period of successful Dutch visitations to Australian shores.

Following James Cook's discovery of the eastern seaboard and his charting of the east coast, further significant details to the charts were added by the later expeditions of Frenchmen, D'Entrecasteaux and Baudin, and the Englishmen, Bass and Flinders in 1798. Further work on the east coast was carried out by Flinders in 1799 and from 1801 to 1803 during his circumnavigation of the continent. The final work of completing the charting of the entire coastline was carried out by Phillip Parker King, John Clements Wickham and John Lort Stokes. It was Stokes who finally proved the death knell for the theory fondly entertained by the Admiralty of a great river flowing from the centre of the continent which would provide a highroad to the interior. Stokes would spend 6 years examining all possible river openings without the hoped-for result. Land explorations would finally confirm that the continent was largely a desert of challenging vastness. The exploratory expeditions can be said to have concluded by the middle of the nineteenth century.

The paper also includes a short section focussing on cartographic heritage projects being carried out in other countries.

BIOGRAPHICAL NOTE

Dorothy Prescott was born in Great Britain. She graduated from the University of Durham with an honours degree in Geography and later obtained qualifications in librarianship. After working for 6 years at the University of Ibadan in Nigeria she was appointed, in 1964, as the Map Librarian of the University of Melbourne. From 1979 to 1983 she was the Map Curator at the National Library of Australia in Canberra

after which she established her own consultancy business in Melbourne dealing in Map Information and Research, and Map Library Management.

Dorothy was a foundation member of the Australian Map Circle in 1972 and served as President from 1979 to 1989. In 1980 she joined the Australian Institute of Cartographers, now the Mapping Sciences Institute of Australia, and since 1982 has been Australia's representative on the International Cartographic Association's Commission on the History of Cartography.

Dorothy served on the Surveyors Board of Victoria as community representative from 1987 to 2003 and is currently a member of the Geographic Names Board of Victoria. In the Queen's Birthday Honours List for 2003, she was awarded the Medal of the Order of Australia for services rendered to map librarianship and cartobibliography. Dorothy has written over 30 articles on maps and map librarianship. Since retiring in 1996 her main interest has been map history and cartobibliography.

The Discovery and Mapping of Australia's Coasts: the Contribution of the Dutch, French and British Explorer-Hydrographers

The Unknown Continent

Centuries prior to the discovery of Australia the ancients postulated theories of its undoubted existence based on their understanding of the distribution of earth's land and ocean masses.

Our conference today deals with 400 years of mapping this continent from the first recorded documents of the Dutch until the present day. This leaves untouched possible earlier voyages as yet unproven but by no means undiscussed of the Portuguese, Spanish, Chinese and even the Egyptians for whom claims have been made. We do however have one paper touching on the sixteenth century in Robert King's presentation on the Jagiellonian Globe and the Dieppe maps.

It is to the Dutch therefore that first discovery and documentation must be attributed with the first land fall made by the East India Company's ship, the *Duyfken*, master Willem Jansz, in 1606, although at that time he did not recognise that his discovery was part of the southern continent and not part of New Guinea.

Plate 1. This map shows the state of knowledge in 1587. The great *Terra Australis* occupies much of the southern hemisphere, but New Guinea is shown as an island and a note comments on this. Another map maker Cornelius de Jode, son of Gerard, included in the second edition of the *De Jode Atlas* of 1593 a plate showing New Guinea on which can be found the words in Latin that there exists uncertainty about whether New Guinea was an island or part of a southern continent. (Tooley 1985, p. 55) Both these maps among others suggest that this knowledge was circulating at that time.

For more than 100 years the Dutch made both planned and accidental landfalls on the Australian continent but in the late 1750s abandoned any real interest in the southern continent. Everything they had discovered over that period led them to believe there were few prospects for trade, which was their *raison d'être*, nor with the failure of their ships to find Torres Strait, had they been able to find a short cut to the Pacific Ocean.

Accidental Landfalls on the Australian Continent by the Dutch

From the year 1616, with the *Vereenigde Oost-Indische Compagnie's* (VOC) (United East India Company) adoption of new sailing directions, many Dutch ships found themselves on Australian shores. The new directions, instigated by Hendrik Brouwer, in 1610, and subsequently tried out by several East India Company masters before their adoption in 1617, cut the sailing time by half and enabled crews to arrive at their destination in the East Indies in a reasonable state of health. The new procedure involved sailing south from the Cape of Good Hope into the region of the westerly winds (S36°-S44°) and then taking a bearing east for 1000 Dutch miles (3865 nautical miles) before turning due north. The difficulty with this procedure was the inability to

measure distance sailed accurately. Normally, this was done by means of the log but the method took no account of the strength of currents, as a result of which ships regularly overshot their turning point and finished up on the western Australian coastline. Schilder also tells us that at this time there were two measurements of the mile in use, the old German mile and the Snellius mile, which also complicated matters.(Schilder 75, 54-60)

Plate 2. The map by Hessel Gerritz, Cartographer to the VOC, shows the many discoveries made between 1616 and 1628 (Schilder 1985, Map 31), all of which were accidental in nature. They include the first landfall made by the ship *Eendracht* in 1616, master Dirck Hartog, then after the *Eendracht* the *Mauritius* in 1618, on Gerrits' map shown by Willem's Rivier, the *Amsterdam* and *Dordrecht* in 1619 shown by Dedel's Landt, the *Leeuwin* in 1622 and the *Vianen* shown by De Witt's Land in 1628. Also shown on this chart is the one accidental discovery of the south coast made in 1627 by the *Gulden Zeppard*, master Frans Thyssen, carrying a high official of the VOC, one Peter Nuyts after whom the discovery was named.

Planned Voyages by the Dutch to the Great South Land

Almost all the planned voyages made by the VOC were to the north of the supposed continent, particularly towards New Guinea about which not a great deal was known but which was fabled to be the source of gold. The two exceptions to this statement are voyages of Abel Tasman and Willem de Vlamingh which we will consider later. The first of these planned voyages was made in 1605-6 by an expedition sent to discover the 'great land of Nova Guinea and other unknown east and south lands' (Schilder 1976, 43) and it was made entirely for the purposes of trade, the great motivating force behind Dutch enterprises. The first voyage was by the ship *Duyfken* from Banda under master Willem Jansz and Jan Lodewycks van Rossengrin, during which the west coast of the Cape York Peninsula was discovered. **Plate 3.** The map of the voyage shows Nova Guinea on Cape York as the Dutch were unaware of the existence of Torres Strait and believed that this was still part of the coast of New Guinea. The original chart and ship's journal have been lost. However, a manuscript copy of the original chart showing the details of the voyage was made about 1670 [Robert 1973, Map 3 at end] and occurs in the Van der Hem Atlas, which is held in the National Library of Austria. (Schilder 1976, Map 22). Another recording of this voyage occurs in the VOC archive on the great manuscript map of the Pacific which was constantly brought up to date by the chief cartographer of the VOC Hessel Gerritsz (Schilder 1976, Plate VI). The only printed map alluding to the voyage of the *Duyfken* is that by Joannes Janssonius *India Orientalis Nova Descriptio* published in 1633 (Schilder 1976, Map 24), which was of great importance until the discovery of the map in the Van der Hem Atlas.

The next voyage of 1623 which partly repeated the voyage of the *Duyfken* was by the ships *Pera* and *Arnhem*, sailing from Amboina under Jan Carstenz and Dirk Meliszoon. **Plate 4.** The latter was killed early in the voyage and his command taken over by Joosten van Colster. The two ships sailed down the west coast of Cape York to just over 17°S and then following orders returned north in a more leisurely manner the while mapping the coast. However on the second night of the return voyage the ships were separated. The *Pera* continued north while the *Arnhem* chanced on the islands off the north west coast of the Gulf of Carpentaria and then the Wessel

Islands before sailing on to Banda. The discoveries of the ship *Arnhem* are commemorated by the name Arnhem Land. A few years later the discoveries of the *Pera* appeared on printed maps, the earliest being a French map of 1628 by Cornelius Danckerts and Melchior Tavernier, *Charte universelle de tout le monde*. (Schilder 1976, Plate XVI). The first printed Dutch map to show the *Pera's* discoveries is that by Henricus Hondius of 1630, *Nova totius Terrarum orbis Geographica ac Hydrographica Tabula*. (Schilder 1976, Map 39).

Because the journal and original chart of the *Arnhem* have been lost very little was known about her discoveries, and they never appeared on any subsequent maps. The voyage was important for Australia as the original manuscript chart produced by Arent Martensz de Leeuw, the chief pilot of the expedition showed detail of the west coast of Cape York. (Schilder 1976, Map 36). Copies of both his chart and that made by the cartographer on the *Arnhem* of the north west coast of the Gulf of Carpentaria and part of the Wessel Islands can be found in the Van der Hem Atlas. (Schilder 1976, Maps 37 & 38). The first printed map in an Atlas to correctly show part of Australia is the world map *De La Terre Universelle Typus Orbis Terrarum* from the French edition of the Mercator/Hondius Atlas Minor of 1630. (Schilder 1976, Map 33)

A further planned voyage was undertaken in 1636 by the ships *Cleen Amsterdam* and *Wesel* under the command of Gerrit Thomasz Pool, who was killed very early in the voyage and replaced by the merchant Pieter Pieterszoon. The instructions for this voyage were to sail to the east and then south then west so that the ships would circum-navigate the continent if it were an island. However due to contrary winds these instructions were incapable of being carried out it being the season of the south east trades which prevented sailing vessels progressing in an easterly direction along the north coast. After progressing to the Carstensz landfall the ships then turned west making for the Aru Islands from whence they again turned south and east and sailed to S11° where strong easterly winds were encountered. Abandoning their instructions they sailed west along the northern coastline of the Cobourg Peninsula and Melville Island, naming this new discovery Van Diemen Land. There are no surviving charts of this discovery and it was regarded as a failure.

The decision to mount yet another major voyage of discovery was made in 1642 by the then Governor General of the East Indies Antonio van Diemen. This was to settle once and for all the question of the Great South Land and its dimensions, also to find a way to rich and important countries for the purpose of trade and finally to extend the influence of the Dutch in this region. The person chosen to lead this expedition was Abel Janszoon Tasman who under took these instructions in two voyages of 1642-43 and 1644.

In the first of these voyages Tasman sailing with the *Heemskerck* and *Zeehaen* discovered and named Van Diemen's Land (Tasmania), New Zealand, Fiji and Tonga returning by the north coast of New Guinea to Batavia. The major achievement of this voyage was the delimitation of the extent of the Great South Land, however he did not find any route north of the continent through to the Pacific Ocean. Disappointment with these findings accounted for him being sent on a further voyage to search again for the hoped for strait north of the continent. [Plate 5](#). This he failed to do not venturing far enough east to enter the Torres Strait he turned south and west sailing along the entire coast of the Gulf of Carpentaria filling in the gaps in knowledge and

finally recording the coastline between Melville Island and De Witt Land thus connecting all the preceding disparate discoveries on the northern coast.

Major Maps of New Holland

It took only a short while before the findings of Tasman's voyages became public. Willem Jansz Blaeu's world map of 1619 (1645-6) (Schilder 1976, Map 62) revealing all the new discoveries flowing from this voyage. As Schilder tells us this map is also important as regards the nomenclature of the continent, as here for the first time is the use of the name 'NOVA HOLLANDIA'.

Two important manuscript maps were made from the charts constructed during Tasman's two voyages. They are known as the Bonaparte or Tasman map, [Plate 6](#). (Schilder 1976, Map 56. Perry 1982, Plate 14) now held in the Mitchell Library, Sydney and the Eugene Map (Schilder 1976, Map 57) so named after its former owner, Prince Eugene, now in the Austrian National Library, Vienna. The tracks of Tasman's ships are shown on the Bonaparte map for both voyages but only the track of the 1642-3 voyage is shown on the Eugene. The Bonaparte became the standard form for all maps of the continent for the next 100 years.

It in turn was copied by the Frenchman, Melchisedec Thevenot, who in 1663 included a similar map in the work, *Relation de divers voyages curieux* published in Paris (Schilder 1976, Map 85 state 1, Perry 1982, Plate 28, state 2). A 100 years later the map *A complete map of the Southern Continent* by Emanuel Bowen the English cartographer appeared in 1744 (Perry 1982, Plate 29). After Tasman's 1644 voyage the Dutch concluded that there was little point in making any further voyages of discovery. Between 1644 and 1705 no further interest was shown by the Dutch in the north coast. Thus any voyages made after this date were for a particular reason such as Maarten van Delft's voyage of 1705 to make a survey of the north coast during which only a small section was charted and the 1756 expedition by Jean Etienne Gonzal and Lodewijk van Assenchens made for the same purpose which achieved nothing. [Robert 1973, 40-45, 49]

The one last voyage that should be mentioned in this overview of Dutch discovery is that of Willem de Vlamingh made in 1696-7 which was made for the purposes of finding any survivors from the shipwreck of the *Ridderschap van Holland*. (Schilder 1985) The chart of the west coast of Australia by Victor Victorszoon the cartographer and artist on board the *Geelvink* is a copy of the original chart made by Willem de Vlamingh which is now lost. It is quite detailed recording the hazards to be found on this coastline. This chart was also accompanied by a series of coastal profiles whose locations were marked on the chart. There are 15 in toto. These profiles were received by the Prins Hendrik Maritime Museum in the 1970s, and were only recently identified and matched to the chart by Günter Schilder, the expert on Dutch cartography of Australia.

It should be mentioned at this point that the National Library in Canberra holds two archival charts of this voyage, escapes from the VOC's secret archival chart collection, which were identified by Günter Schilder on his visit to the library in 1981 (Schilder 1985, p. 95). The charts are anonymous but have been attributed by him to Gerard van Keulen, and are exact same size copies of Victor Victorszoon's copy of

Vlamingh's original chart made during the voyage. [Plate 7](#). They also have the numbers of the coastal profiles of the western Australian coast made by de Vlamingh during that voyage shown on them, in contrast to the reduced copy of Victor Victorszoon's chart made by Isaac de Graaf, official chart-maker of the Chamber of Amsterdam 1705-1743 which does not mark the profile locations.

Armchair Geography

With the decline in Dutch interest in the southland a new phase in the mapping of the continent began.

The period between the Dutch losing interest in this continent and the arrival of the French and the British was the era of arm chair geography, when some widely imaginative maps were produced by mostly French geographers (Perry 1982, Plates 30 and 31) but also some British cartographers. [Plate 8](#). It is difficult to think of any other continent with which a parallel can be drawn for such distortions of reality as depicted in maps which linked Australia with Tasmania, New Guinea and the New Hebrides in one super continent.

These theoretical productions were later shown to be mere speculation by the publication of the charts of James Cook's 1768-72 voyage in the *Endeavour*, in which the entire missing east coast of New Holland was charted.

The Pacific

The mid eighteenth century heralded the arrival of scientific exploration of the Pacific. By this time Spain's dominance as a world power was waning and its exclusive control of the Pacific had been eroded by the privateering of British captains such as Drake, Cavendish and Hawkins in the late fifteen and sixteen hundreds. The last significant expedition of this kind was led by George Anson from 1739-44. During the course of this he plundered the coasts of Chile and Peru and seized the Spanish treasure ship *Nuestra Senora de Covadonga*. [Badger 1996, 42]. But from then on scientific exploration of the Pacific was to be dominated by the British and the French.

Two British expeditions were sent to explore the Pacific in 1764 and 1766. Both of these expeditions used the route round Cape Horn first traversed by Magellan and used since that time by the Spanish to enter the Pacific. The first led by John Byron was largely unsuccessful and was followed almost immediately in 1766 by the two vessel expedition of Samuel Wallis and Philip Carteret. The instructions for this second exploration were to search for Terra Australis Incognita. Despite the knowledge of New Holland most European nations still believed that there remained a great land mass to be discovered in the southern ocean. None of these vessels however reached the east coast of Australia. It remained for James Cook to find in 1768 after his scientific observations on Tahiti were concluded.

Discovery of the East Coast of the Southern Continent

Despatched in 1768 to the Pacific to carry out the observations of the transit of Venus, James Cook chose to return to England via the Cape of Good Hope. He and his officers did not consider the *Endeavour* was in a condition to withstand the bruising

conditions of the route via Cape Horn. This decision meant that it would fall to Cook's lot to be the discoverer of the long imagined east coast of New Holland. Thus on April 19th (ship's time), 1770 Zachary Hicks his second in command sighted the east coast of New Holland at a spot later named by Cook as Point Hicks. [Plate 9](#). Cook conducted a running survey of the east coast working northwards until his ship struck a reef off shore of Cape Tribulation on 11th. June. It took almost a week to find a spot where the ship could be beached and repaired. The voyage was resumed in early August. Cook rounded Cape York and on Possession Island claimed the eastern portion of New Holland for Great Britain and named it New South Wales.

New South Wales

Here for the first time we see the name 'New South Wales' applied to the eastern half of the continent. Incidentally, this was Cook's second choice of name for the eastern part of New Holland for he first named the east coast 'New Wales' in honour of the King's son the Prince of Wales. This discovery was of huge interest to Europeans and the many foreign language versions of Cook's voyage bear testimony to the significance of his discoveries, particularly when this first voyage was followed by a second made at the suggestion of Cook (Beaglehole 1974, 277-279) to the Admiralty that if an undiscovered continent existed it must lie in very high latitudes. This second voyage of Cook's finally solved the debate as to the existence or otherwise of a great Terra Australis Incognita and revealed that only the two separate and discrete continents of Antarctica and Australia existed. Cook's charts appeared in John Hawkesworth's *An account of the voyages undertaken ... for making discoveries in the southern hemisphere...* 1773. The text being based on the journals of the various commanders included.

Although the size and extent of the Australian continent had been revealed by Cook there still remained some gaps in the coastline, notably on the south east coast where there remained an unknown stretch of coast from St Peter and St Francis Isles to Cape Howe. In 1791 the British hydrographer, George Vancouver visited the south western coast enroute to North America. He surveyed the coast from Cape Leeuwin to the westernmost end of the Recherche Archipelago and discovered the magnificent harbour of Albany which he surveyed and named King George 111 Harbour. However his visit was fleeting due to inhospitable weather and he decided to press on to his work in North America. In 1795 Flinders and Bass had sailed as crew members aboard the *Reliance* with Governor John Hunter to New South Wales. The two young men persuaded Governor Hunter to let them explore the coast in a small boat which they took as far south as Lake Illawarra.

Bass Strait

The insularity of Tasmania was established by George Bass' small boat journeys along the Victorian coast to Western Port in 1797-8 and later in 1798-9 by Matthew Flinders and George Bass' circumnavigation of Tasmania in the *Norfolk*. This resulted in a chart by Flinders, *A chart of Bass's Strait between New South Wales and Van Diemen's Land explored by Mattw. Flinders, 2nd. Lieut. Of His Majesty's Ship Reliance... by order of His Excellency Governor Hunter 1798-9*. London, Pub. June 16th. 1800 by Aaron Arrowsmith. [Tooley 1985, T65]. Three states of the map are known. The above rendering is a revised issue of the first state in which the term

‘surveyed’ rather than ‘explored’ was used. It was issued with the identical date. Other changes from the first state are mainly to spelling, ‘Bass’s’ rather than ‘Basses’ and ‘Van Diemen’s’ rather than ‘Van Diemans’. Flinders is shown as ‘Matthew Flinders, 2nd Lieut. ... Majesty’s Ship *Reliance* rather than as ‘Lieut. Flinders’. The third state is updated to 1809.[Perry and Prescott 1996,113-4, 227].

In 1798 Flinders was sent to rescue the crew of the *Sydney Cove* in the Furneaux Islands and took the opportunity to do some charting while there. The outcome was a rare issue of 4 charts on 1 sheet (Tooley 1985, 66). The chart contained *Port Dalrymple on the N. coast of Van Diemens Land, The Southernmost of Furneaux’s Islands, Western Port on the S. coast of N.S.W. from Mr Bass’s Eye Sketch and Twofold Bay on the E. coast of N.S.W. examined by M. Flinders and Mr. R. Simpson, October 1798*. This chart was published by Mr Aaron Arrowsmith in London on February 20th 1801.[Tooley 1985, T66]

Later in 1799 before returning to England Flinders charted the NSW coast further north and produced *Chart of a part of the coast of New South Wales from Ram Head to Northumberland Isles 1800*, which was published by Aaron Arrowsmith in 1801. [Tooley 1985, T601].

These three charts just discussed are quite rare and were published by Arrowsmith rather than the Admiralty hence giving rise to the belief that no charts accompanied a short work that he published with the title *Observations on the coasts of Van Diemen’s Land, on Bass’s Strait and its islands, and on part of the coasts of New South Wales ...*

The second matter concerns the existence of a variant state of the title page of the *Observations* with Arrowsmith shown as the publisher viz.

London: Printed for A. Arrowsmith, No. 24 Rathbone Place, By J. Nichols, Earl’s Court, Cranbourne-Alley, Soho. 1801. [Perry and Prescott 1996, 112-114].

This version is not noted in Ferguson, only the version with Nichols as the sole publisher is noted as entry [Ferguson 1941, F329] without the maps. Some idea can be gathered of how rare this work is especially the version with the charts issued by Arrowsmith. The Nichols version (the one without the maps) which is the only version noted by John Ferguson the great bibliographer of Australiana, fetched \$489,300 at auction in March 2005. [The Davidson Collection, Item 160]

The South Coast Gap

There still however remained the stretch of coast from Westernport to the head of the Great Australian Bight. Following the discovery of Bass Strait the British Government ordered James Grant to survey the strait. Grant was at that time in Cape Town bringing out the *Lady Nelson* which was to be used in New South Wales as a survey vessel. Grant reached western Victoria on the 3 December 1800 and found the stretch of coast from Cape Banks and Cape Northumberland (named by him) eastwards. Grant was a navigator and not a surveyor and so prudently kept well off the shore he was coasting. As a result the chart of this discovery showed an indeterminate coastline (shown as a broken line) where portions of the coast were not visible. (Perry 1982, Plate 44. Perry & Prescott 1996, 1812.14,1803.03). In particular the stretch of Bass Strait fronting Port Phillip was shown as a large bay, named by

him Governor King's Bay. He was not aware of the opening at the head of this bay leading to Port Phillip which was discovered later by Lt. John Murray. Grant's track took him east from Cape Patton to Wilson's Promontory and then through Bass Strait using Flinders' chart of Bass Strait which had been published in June 1800.

The French

French navigators who contributed to the charting of this continent are Joseph-Antoine Raymond de Bruny d' Entrecasteaux 1792-3 and Nicolas Baudin 1800-03. The voyage of the former was among other things to search for news of the Comte de la Perouse, who had visited Sydney in 1788 but had then disappeared. Bruny-D' Entrecasteaux' expedition consisting of the vessels *Recherche* and *Espérance*, charted two sections of the coast, the first towards the end of 1792, in Western Australia, from Cape Leeuwin, eastwards towards the Head of the Great Australian Bight. The Cape was charted as an island rather than a cape due to bad weather causing impaired visibility. Detailed charting was confined to a small area in the vicinity of Esperance and the western part of the Recherche Archipelago, principally because of lack of fresh water and unfavourable winds. [Plate 10](#).

The second area of charting was in south eastern Tasmania, where he was responsible for discovering that the d' Entrecasteaux Channel was a strait rather than a bay as previously thought. Also discovered by this expedition were the Huon River and Port Esperance. His general chart of south east Tasmanian coasts corrects the naming of the major bays in previous charting made by Tobias Furneaux in 1773 of the area from South West Cape to Frederick Henry Bay (Perry 1982, 76). This expedition also produced detailed charts of a number of bays in the same area. In all the 13 charts of Australia produced by the expedition under the supervision of C. F. Beautemps Beupré, his cartographer, are very fine examples of French charting whose significance has mostly been ignored. (Perry & Prescott 1996, 125-130)

Two Major Exploratory Voyages to the Southern Continent

Baudin 1800-1803

The French expedition best known to Australians is that of Nicolas Baudin, 1800-03, whose voyage overlapped with that made by the Englishman Matthew Flinders.

[Plate 11](#). This expedition charted the east and north coast of Tasmania, Bass Strait and the portion of the south coast of the continent west of Wilson's Promontory towards the Great Australian Bight and also King George Sound. On the west coast the expedition charted from Géographe Bay to Bonaparte Archipelago. Leaving Europe in October 1800 he arrived on the west Australian coast in May 1801 as the winter was setting in. In fact because of Flinders being on the coast at the same time only a small portion of the western Victorian and south east South Australian coast was actually discovered by this expedition.

Initially, Baudin sailed north with his two vessels, *Le Géographe* and *Le Naturaliste*, after discovering and charting Géographe Bay immediately north of Cape Leeuwin. [Marchant 1982, 114, 126, 158], His orders were to undertake a survey of south-west, west, north-west and north coasts [Baudin 1974, 1,2] previously discovered by the Dutch, terminating his work at Cape Van Diemen, Bathurst Island,

in the Northern Territory and then to head for Koepang, Timor. In fact he concluded his survey near the Bonaparte Archipelago as he was running short of wood and fresh food and so did not reach Bathurst and Melville Islands. Both his vessels remet in Timor in September of that year, where they remained until November 1801. He was also required to examine D'Entrecasteaux Channel all the east coast of Tasmania, Bass Strait and the south coast to long. E129°.

While Emmanuel Hamelin, his second in command, made detailed charts of Swan River, Rottneest Island and Shark Bay Baudin in fact only went ashore at Shark Bay where Bernier Island was charted in detail, although he anchored at Dampier Archipelago and the Bonaparte Archipelago on the north coast. His contribution to the charting of the western coastline was therefore minimal.

Baudin later arrived in Tasmania from Koepang in mid January 1802, to undertake further surveys of the southeastern bays and coves over a period of two months before sailing across Bass Strait to the Victorian coast at Rame Head and from here making his way west along the Victorian coast and finally meeting Flinders in Encounter Bay, South Australia.. Hamelin in the *Naturaliste* spent 8 days examining Westernport closely, 11-17 March 1802, and then made for Sydney where he found the *Géographe*. From here the *Naturaliste* returned to France with sick men and Baudin purchased a new ship from Governor King named the *Casuarina*. They sailed to Tasmania where Fauré surveyed the coasts of King Island over a period of 7 days, Dec 8-14, 1802 and then set sail for King George Sound Western Australia, where they made detailed surveys both there and also along the coast towards Cape Leeuwin. The last charting carried out was on the north west coast.

There are four atlases of this expedition. The first is in two parts, *Partie Historique... Atlas* par Lesueur and Petit accompanying the *Partie Historique* by François Péron (1807]. This atlas contains a general map of the continent and a plan of Sydney. The second part is *Historique. Atlas Deuxième partie* par Louis Freycinet (1811) which was completed after Péron's death in 1810. The same map of the continent also occurs in this plus another 26 maps on fourteen plates some of which are general maps and others plans or sketch maps. Of these two are general maps, one of the entire continent and the second of the southern coastline, 6 are of Tasmanian interest, 2 of Victorian and 2 of New South Wales, 7 of South Australia and 7 of Western Australian coasts and 1 of Coupang in Timor. (Perry & Prescott 1996, 131, 135-147)

The third atlas, *Partie Navigation et géographie. Atlas* by Louis Freycinet, published in 1812, has apart from general charts of each of the areas visited, larger scaled plans complete with ships' tracks which are not shown in the charts of the historical atlases and it also includes some comparative charts showing previous depictions of the coast by earlier navigators. This atlas contains 32 charts of which 30 are of Australian interest, including the same general map found in both the parts of the *Atlas Historique*. These charts were also separately published by the French Hydrographic Office. It contains 9 charts of Tasmanian interest, 3 of Victorian coasts, 5 of South Australia, 9 of Western Australia, 1 of Western Australia and the Northern Territory coast, and 3 of New South Wales coast. (Perry & Prescott 1996, 147-159]

The fourth atlas is a second edition of the *Atlas Historique* published 1824, containing 11 charts and plans of the original 27 found in the first edition plus one new chart of the continent. Those omitted are mostly of the southern coast of Australia (Terre Napoléon) and its parts. The major changes between the two editions of this atlas are the new general chart of the continent which is produced at a slightly smaller scale than that in the first edition and with the name 'Terre Napoléon' removed from the south east coast, acknowledging Flinders' and Grant's prior discovery. The map of Kangaroo Island [Ile Decrès] was also re-engraved removing the names given by Baudin on the north coast, except for those features not named by Flinders but named by Baudin, and replacing them with the names given by Flinders. However on this second edition chart the charting of the south and west coasts of Kangaroo Island which were not seen by Flinders, was first carried out by the French and accordingly retains the names given by the them. (Perry & Prescott 1996, 187-191]

[Plate 12](#). It should be pointed out that the chart produced by Louis Freycinet (Perry 1982, Plate 50) of the south coast of Victoria and South Australia is superior in its charting and details of discovery to that produced by James Grant (Perry & Prescott 1996, Plate 44) the proclaimed discoverer. [Plate 13](#). So although the French can only claim to be discoverers of the coast between Cape Banks and Encounter Bay, they never the less should be acknowledged for their more accurate charting of the coast west of Port Phillip to Encounter Bay.

Flinders 1801-1803

At the same time that the French despatched Nicolas Baudin to southern waters, the British became aware of this situation and sent out Matthew Flinders, who had already been in Australia on two previous occasions, to carry out a comprehensive survey of the the south coast, the northwest coast and the east coast not charted by Cook, Torres Strait and the Gulf of Carpentaria. He particularly was to look for any opening on the south coast that might lead to a strait or inland sea. His expedition left Spithead on 18th July 1801 and reached Cape Leeuwin on 6th December of that year. [Plate 14](#). He immediately began surveying eastwards along the south coast where he met Baudin in April 1802 in Encounter Bay, South Australia. Thereafter he made his way to Port Jackson arriving there on 9 May. He did not carry out any detailed survey of the Victorian coastline believing that Baudin had done just this. He did enter Port Phillip however and examined the southern part of the Bay not knowing that it had been very recently visited by Lieut. John Murray. After a break of two months during which the ship was repaired and reprovisioned he set out again from Port Jackson sailing northwards, surveying from Hervey Bay up to Broad Sound and then the Northumberland and Percy Isles. Running out of favourable winds he then headed for Torres Strait and the Gulf of Carpentaria. His survey had to be abandoned at Cape Arnhem in March 1803 due to the unseaworthy state of his vessel and he made a return to Port Jackson via the west coast, south coast and Bass Strait.

Flinders published the results of his work which incorporated as well as the surveys carried out from 1801-1803, those made by him in 1798 and 1799 previously discussed. He also used materials from Cook's charts and from the Dalrymple versions of the Van Keulen charts of the west coast and brought the work up to date by including new discoveries made subsequent to 1803. Flinders' fairchart is included in this paper to enable it to be more widely known than the traditional published version. In it he used the phrase 'Australia or Terra Australis.' Notably,

Flinders was obliged by the Admiralty to change his nomenclature for this continent to the more acceptable 'Terra Australis or Australia' . He was much in advance of his time as the name was only taken up by Governor Macquarie on receipt of the published version of Flinders' voyage. (Australian Encyclopaedia 1983, v.1. 142). However his work did not appear until 1814, due to his detention by General de Caen in Mauritius for almost 7 years. He finally arrived back in England in June 1810. As a result of this the account of the Baudin expedition appeared in print prior to Flinders' work with French names for many of the features on the maps discovered and named by Flinders. Some of these were later corrected in the second edition of Péron's account of the voyage [Péron 1824, [Chart] No. 1, 13]

Completing the Coastline

King 1818-1822

By the end of 1803 most of Australia's outline had been completed but there remained a few gaps. Following the cessation of hostilities with the French the British Government was in a position to complete the mapping not carried out by Matthew Flinders. For this task the Admiralty chose Phillip Parker King. He arrived in Sydney in September 1817 with the cutter *Mermaid*. His instructions were 'to explore that part of the coast ... not surveyed or examined by the late Captain Flinders'. He was also instructed to look for 'any river on that part of the coast likely to lead to an interior navigation into this great continent'. [Wantrup 1987, 160]. King was engaged on this task for the next 4 ½ years. During this time he also employed the brig *Bathurst* for survey work. The results of his labours were published 1824-25 by the Admiralty as 8 charts and 7 larger scaled plans. [Perry & Prescott 1996, 196, 230-237]. The charts are variously titled as *Chart of part of the N.E.[North, N.W., N.W and West, West] Coast of Australia* and comprise 3 of the N.E.coast, 2 of the N.W. coast and 1 of the north coast and 1 of the N and N.W.coast and 1 of the west coast. In 1826 a series of 7 larger scaled plans of Admiralty Gulf, Exmouth Gulf, Dampier Archipelago, Cambridge Gulf, Buccaneers Archipelago, and The North West Coast of Australia from Camden Bay to Vansittart Bay appeared and in 1827 Macquarie Harbour. [Hordern 1997, 412-3]

Additional plans by John Septimus Roe who accompanied King, *Plan of Endeavour River 1819* and *A survey of Port Jackson 1822* were also issued as part of King's survey work.

The charts are rare; whether this is because they were published separately from the narrative of the voyage unlike those of his predecessors, Cook, Vancouver and Flinders we do not know. King describes his account which he wrote and published without Admiralty support as *Narrative of a survey of the intertropical and Western Coasts of Australia performed between the years 1818 and 1822* as 'useful to accompany the Atlas of Charts of the Coast recently published by the Board of Admiralty'. (Wantrup 1986, 161). The *Narrative* itself includes two charts the first by King and the second by J.S. Roe who worked with him. [Perry and Prescott 1996, 196-7]. King's chart is titled *Chart of the Intertropical and West Coasts of Australia, as surveyed in the years 1818 to 1822* [Perry 1982, Plate 52] and was engraved by John Walker who was also responsible for the engraving of the large charts and plans issued by the Hydrographical Office. [Plate 15](#). This chart gives an overview of his 4 ½ years of survey work on the Australian coastline and was published by John Murray, the London publisher. The second chart was by Roe showing a *Plan of Port*

Cockburn, between Bathurst and Melville Islands from a survey made by J. S. Roe in Octr 1824. Although not made while Roe was working with King it was included in the *Narrative* to record the establishment of a settlement in an area previously charted by King.

Wickham and Stokes

Yet still after the work of Phillip Parker King the British Admiralty was not convinced that the secrets of the Australian coasts had been fully revealed. To this end it sent yet another surveying voyage to these shores in 1837 to determine whether or not the deep bays and indentations occurring on the north west coast might lead to mighty rivers whose discovery would open a route to the interior and facilitate the colonisation of this part of Australia so close to the British Indian possessions. In addition to this work the commander of this expedition John Clements Wickham was instructed to also improve the charts of of specific areas such as Torres and Bass Straits and the approaches the Swan River, Albany, Adelaide, Cape Howe, Cape Upstart to Palm Island, the Endeavour River area, Cape Melville and the southern coast of the Gulf of Carpentaria. The surveying vessel *Beagle* was chosen for this work which lasted from 1837 to 1843. In 1841 Commander Wickham retired due to ill health and it was left to John Lort Stokes who succeeded him as Commander to complete the surveying and write up the account. [Plate 16.](#)

On the north west coast there remained to be completed the work roughly carried out by Freycinet, the charting of King Sound, and the eastern part of Joseph Bonaparte Gulf and the waters near Darwin. Stokes and Wickham charted a number of rivers including the Albert and Flinders rivers which flow into the Gulf of Carpentaria and they discovered the Fitzroy, the Victoria and the Adelaide on the northwest coast. At the conclusion of the surveying voyage there was no doubt left about the impossibility of a large navigable river leading into the continental interior the coasts of Australia were now too well examined for that.

New Admiralty charts which resulted from this work are signalled in Ingleton and are too numerous to list here. (Ingleton 1994, 123-4).

Land explorations would finally confirm that the continent was largely a desert of challenging vastness. The exploratory expeditions by the explorer-hydrographers can be said to have concluded by the middle of the nineteenth century.

NATIONAL HERITAGE MATTERS

As part of this 400 year celebration it is appropriate to consider national heritage matters. Although the expression has been around quite a number of years I have encountered puzzlement and lack comprehension when the term cartographic heritage has been mentioned. We need to define what we actually mean by this term so that we are all talking about the same thing. For my part I believe that we mean the totality of everything cartographic that we Australians have inherited pertaining to this continent. This extends beyond actual artifacts in the shape of maps, globes, atlases and other cartographic formats to the inherited methods of map making and instruction in this art that have been brought here from other parts of the world. It would also include both hard copy and digital records, descriptions and finding aids

created for these formats and details of the map makers both individual, corporate, official and commercial.

I have been asked to indicate some of projects which have been carried out or are underway in other countries, mostly those I have found being from countries of the old world which have a much longer time frame for such studies. My observation however is that in all cases the projects depend on a very few dedicated individuals, who either alone or in a small group have been able to raise funds or stimulate government into giving support for such projects. We need to be considering this at least as one line of approach to this task, and additionally seeking to educate and inform our colleagues who are not committed that their talents are needed in this endeavour.

In Greece an initiative has been carried through to create a National Centre for Maps and Cartographic Heritage in Thessaloniki. This is a “public organisation operating under private law but supervised by government”. It was established in 1977. It has a map library and organises workshops and conferences and publishes a journal and books on cartographic subjects. Its last conference was the first meeting of the new ICA Working Group on Digital Technologies In Cartographic Heritage. The theme of the conference was ‘Digital Approaches to Cartographic Heritage’ and it was held in May at the Centre. This initiative aimed to bring together map historians, scholars, researchers, cartographic scientists, digital industry/market operators, map curators and students coming from different cultural, scientific and engineering backgrounds to exchange views and ideas on the problems and solutions in the use of digital technology with reference to cartographic materials. The Centre has launched a new journal e-Perimetron devoted to this subject which is an International Web Journal (http://www.maplibrary.gr/e_Perimetron]. The papers from this conference are published in the web journal.

Another completely different type of heritage concern is the German venture to organise, conserve, catalogue and index the large map collection, archive and library of the famous German publishing house Perthes of Gotha which has been operating since 1785. The Province of Thüringen recently purchased (2003) this from the family. Progress on this is slow due to lack of funds but the impending 150th anniversary of *Petermann's Geographische Mitteilungen* in (2005) released extraordinary funds for an exhibition *Der Erde ein Gesicht geben. Petermanns Geographische Mitteilungen und die Anfänge der modernen Geographie in Deutschland (Giving the earth a face. PGM and the beginnings of modern geography in Germany)*. The exhibit included published and draft versions of maps, communications, photographs etcetera which appeared in the journal between 1855 and 1945. The exhibition had 15 topics one of which was on Augustus Petermann, the famous German geographer, and the unveiling of Australia's interior in the mid 1800s. Since all the exhibits are digitized the organisers would be open to present the whole or adapted parts of the exhibition overseas! We should give that some thought as nothing to my knowledge has been done on the contribution of German cartography to the mapping of this continent.

The last example of overseas projects is purely cartographic. It comes from Hungary and focuses on the revival of the traditional art of map and globe making. Zsolt Torok of Budapest has established the business Cartart FacTsimile (http://lazarus.elte.hu/%7Ezoltorok/Cartartweb/cartart_maps.htm) which produces

new editions of old original fifteenth and sixteenth century world maps by the traditional methods of woodcuts and copper plate engravings. These maps are printed onto fine handmade archival quality paper and are coloured by hand. They are not reproductions, copies or facsimiles but rare and original new editions.

One item per annum is added to the stock on offer.

Because our country is young there is not such a vast field of endeavour. Some projects that might be considered are working with local history societies and museums to help them identify and conserve their treasures. In such work it is not unusual to come across unique items such as the river boat maps used by the owners of paddle steamers on the Murray River. Such items are of enormous interest as they record the river as it was at an earlier period of time. Many are in dire need of conservation and preservation apart from the importance of recording that such items exist and where they might be seen.

Closer to home there is a requirement to record the history of mapping organisations both orally and in writing, while the senior members of such departments are still alive. Other fields of activity can be found listed on the British Cartographic Society's website <http://www.cartography.org.uk/Pages/Membership/Curators/Toolbox.html>. Additionally, the Curator element of this society maintains a list of digital projects in progress, completed or under consideration. This is maintained to alert members and others to items of interest and to circumvent possible duplication of efforts. This listing can be viewed at <http://www.lib.cam.ac.uk/maps/Digital.htm> where it is under the care of Anne Taylor, Head of the Map department of the University of Cambridge Library. These are just a few selections for thought as later on during this conference there is to be a section on heritage matters during which I am sure there are others of you who will have ideas and suggestions that cartographers as a group can address. In particular I would like to suggest that working with other groups would add stimulation and new ideas on themes and methods we could use to promote the cartographic heritage of this nation.

MAPS

Plate 1. Mercator, Rumold *Orbis terrae compendiosa descriptio quam ex magna Universali Gerardi Mercatoris Domino Richardo Gartho ... / Rumoldus Mercator fieri curabat* A. MDLXXXVII. Mitchell Library. ZM2 100a/1587/1

Plate 2. Gerritsz, Hessel [Chart of the Malay Archipelago and the Dutch discoveries in Australia]National Library. MAP RM 750

Plate 3. Anon. *Dese pascaert verthoont de wegh, soo int heen als in het weerom seylen, die gehouden is bij het jacht Het Duijfen in het besoecken van de lands besoosten Banda, tot aen Nova Guinea =Discovery of Australia by the Yacht Het Duyfken 1606*. Reproduction of original ms. chart held in the Osterreichische Nationalbibliothek, Vienna. In *Monumenta Cartographica*, Vol. V. Plate 125. National Library. MAP Raa 265 Plate 125

Plate 4. [Manuscript-Chart of the voyage of the Ship Arnhem 1623] Reproduction of original ms. chart held in the Osterreichische Nationalbibliothek, Vienna.

Reproduction in Robert, Willem *The Dutch explorations 1605-1756 of the north and northwest coast of Australia ...* Amsterdam. Philo Press, 1973

Plate 5. Van Braam, J. *Kaart der reyse van Abel Tasman volgens syn eygen opstel.* Plate from: *Verhandeling der zee-horenkens en zee-gewasson in en omtrent Amboina en de naby gelegene ey landen, mitsgaders een naaukeurige beschryving van Banda .../* door François Valentyn. Mitchell Library F998/V

Plate 6. Tasman, Abel Janszoon [Australia and New Zealand]: from the original made under the direction of Abel Tasman / facsimile drawn by James Emery in 1946. National Library. MAP NK9814

Plate 7. Van Keulen, G. *T'Zuijd land ontdeekt door Willem de Vlaming in der Maande van Jan an February 1697 met t' Yagt de Geelvink, de Hooker de Nyptang ent galjoot t' Weseltje.* National Library. MAP RM 751.

Plate 8. Bowles, John Detail from *A map of the world or terrestrial globe in two planispheres ...* London, Printed ... 1740. National Library. MAP RM 3874.

Plate 9. Cook, James *A chart of New South Wales, or the east coast of New Holland. Discovered and explored by Lieutenant James Cook, Commander of His Majesty's Bark Endeavour in the year MDCCLXX.* National Library. MAP T325.

Plate 10. Beautemps Beupré, C. F. *Carte réduite de la Nouvelle Hollande et des archipels ... 1792 et 1793.* Ms map. National Library. MAP RM3852.

Plate 11. Freycinet, L. *Carte générale de la Nouvelle Hollande... 1808.* In: *Voyage de découvertes aux terres australes. Partie navigation et géographie. Atlas.* Paris, 1812. National Library. MAP Raa2-s3. Plate 1

Plate 12. Freycinet, L. *Carte générale de la Terre Napoléon... 1808.* In: *Voyage de découvertes aux terres australes. Historique . Atlas. Deuxième partie redigée par M.L. Freycinet.* Paris, 1811. National Library. MAP Raa1 Plate 2. Portion of Victorian coast.

Plate 13. Grant, James *Chart of the N. and W. parts of Bass's Straits discovered and sailed through in a passage from England to Port Jackson in December 1800.* National Library MAP F 482.

Plate 14. Flinders, M. [Australia or Terra Australis] 1804 Ms. fairchart in U.K. Admiralty Archives, Taunton, Somerset. y 46/1 Shelf Xr

Plate 15. King, P.P. *Chart of the intertropical and western coasts of Australia.* In: *Narrative of a survey of the intertropical and western coasts of Australia: performed between the years 1818 and 1822 by Phillip Parker King.* London, John Murray, 1827. Mitchell Library. 919.4/83 SET.v.1

Plate 16. Arrowsmith, John *Australia 1846.* (The parts examined in HMS Beagle are coloured red.) In: *Discoveries in Australia: with an account of the coasts and rivers explored and surveyed during the voyage of H.M.S. Beagle in the years 1837-38-39-*

40-41-42-43... By J. Lort Stokes. London, T. and W. Boone, 1846. Mitchell Library .
DSM 980.1/332A1 v.1.

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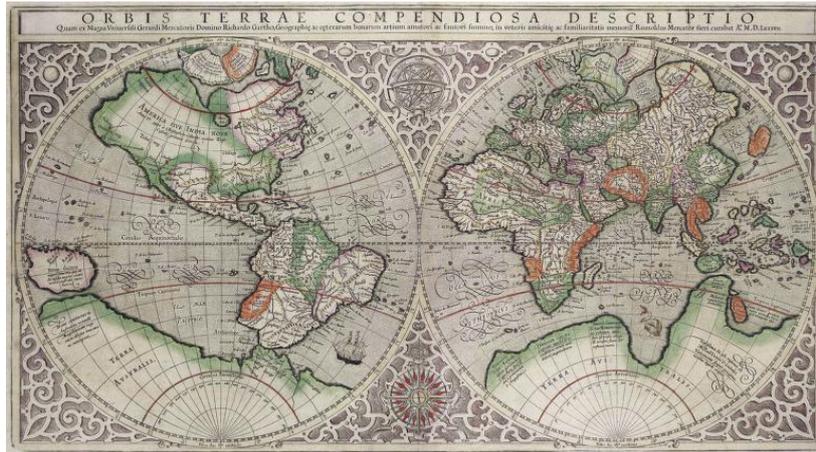
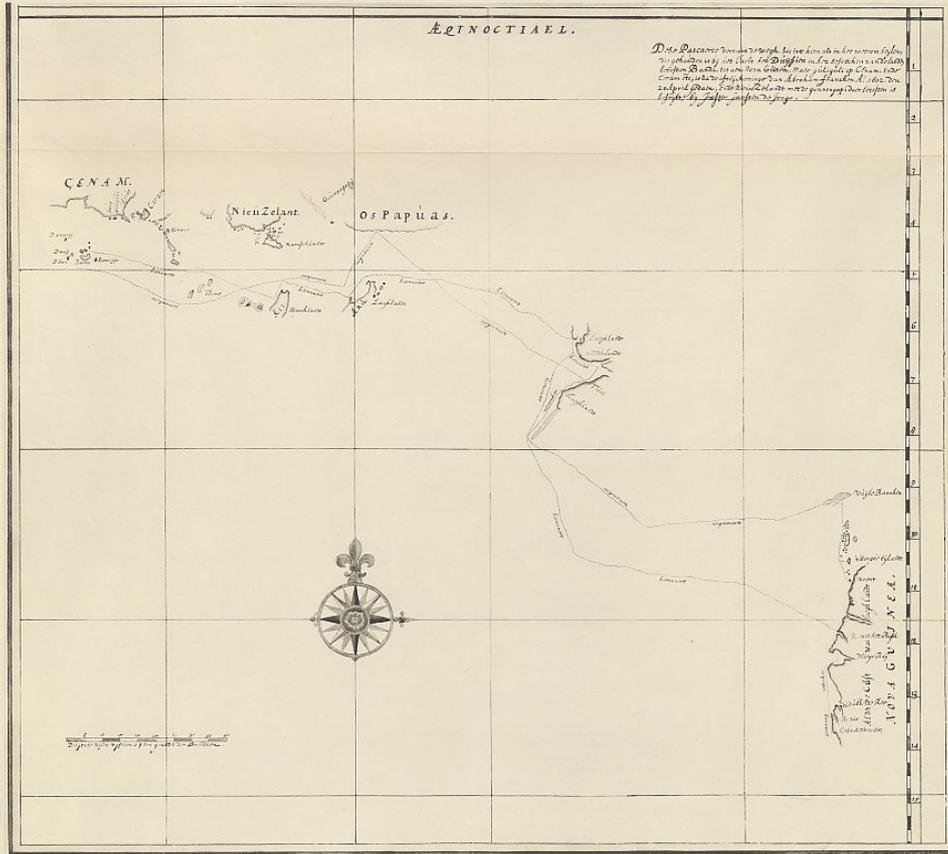


Plate 1



Plate 2



THE DISCOVERY OF AUSTRALIA BY THE YACHT HET DUYFIEN, 1666. — FROM THE SECRET ATLAS OF THE EAST INDIA COMPANY, c. 1670

THE HAGUE — MARINUS NIHOFF

Plate 3



Plate 4

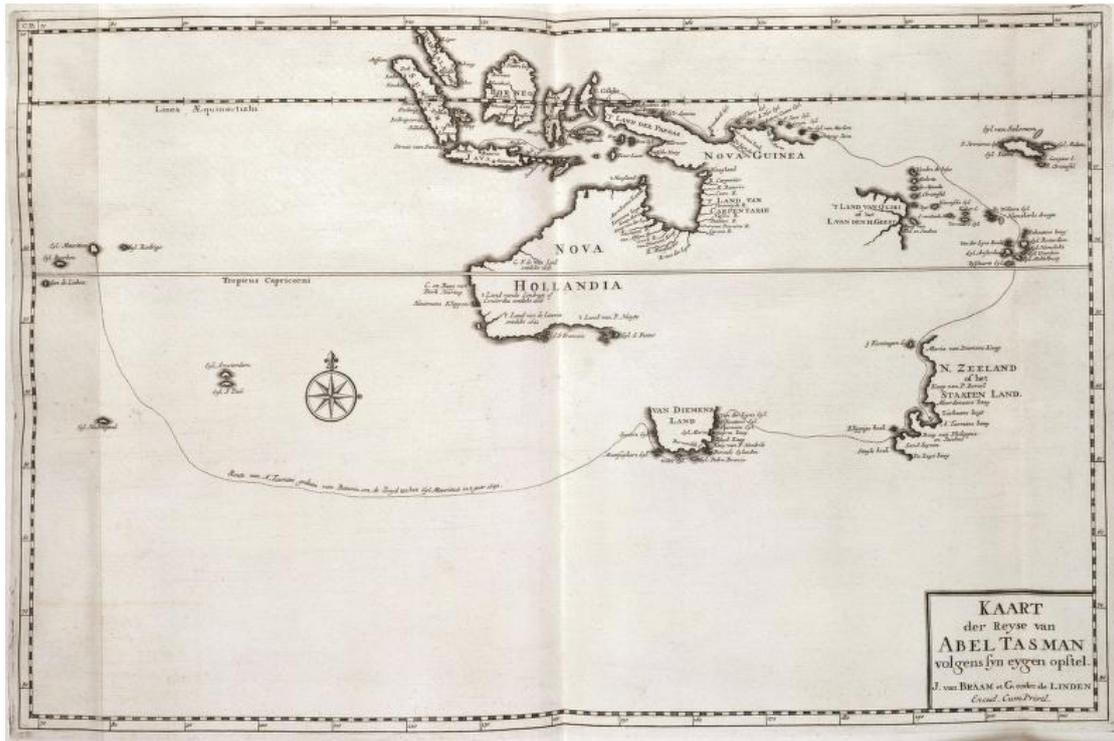
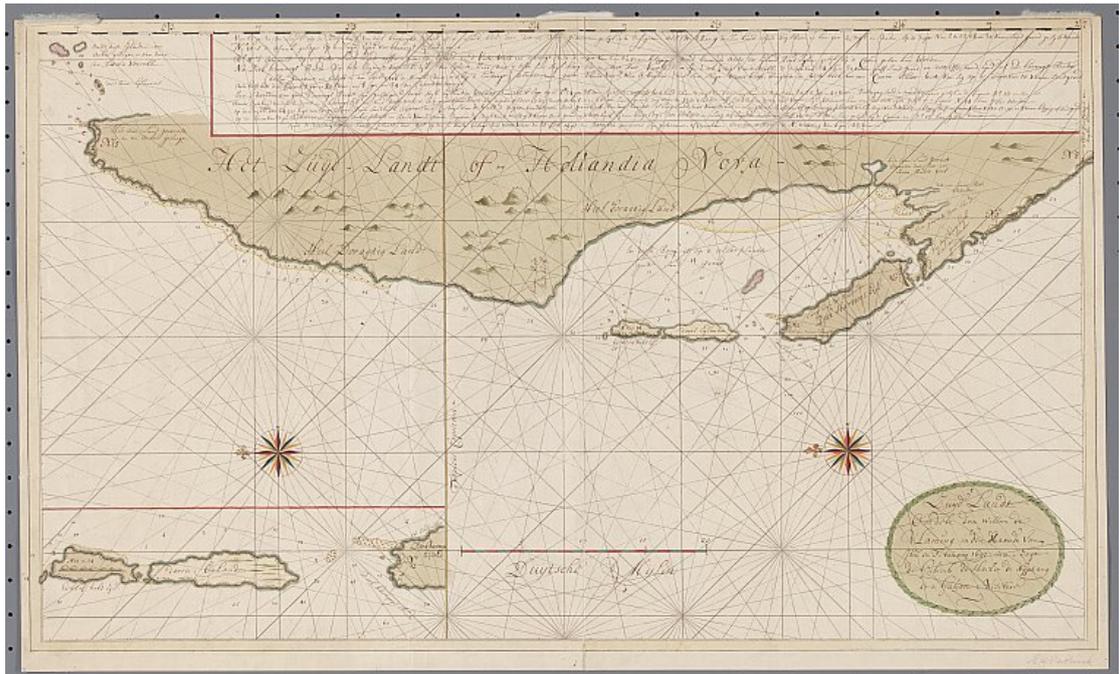


Plate 5



Plate 6



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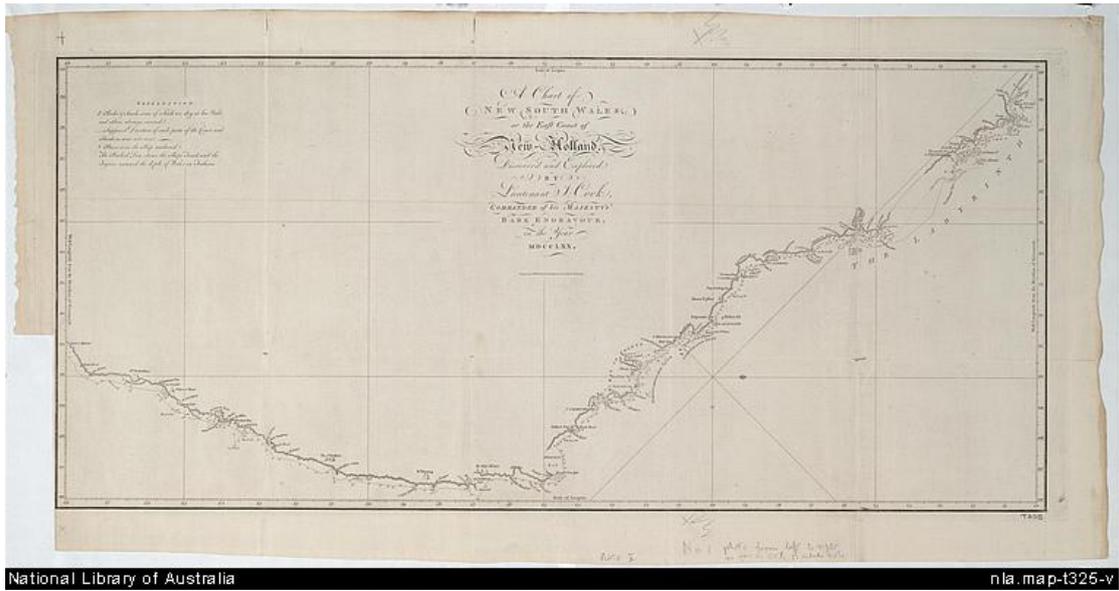
Plate 7



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Plate 8



National Library of Australia

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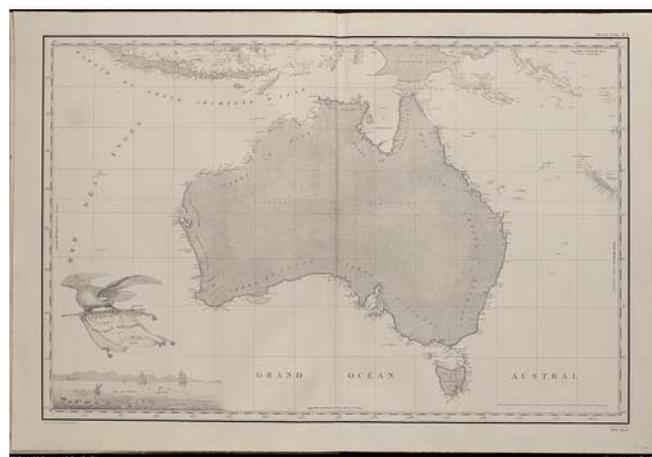
Plate 9



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Plate 10



National Library of Australia

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Plate 11

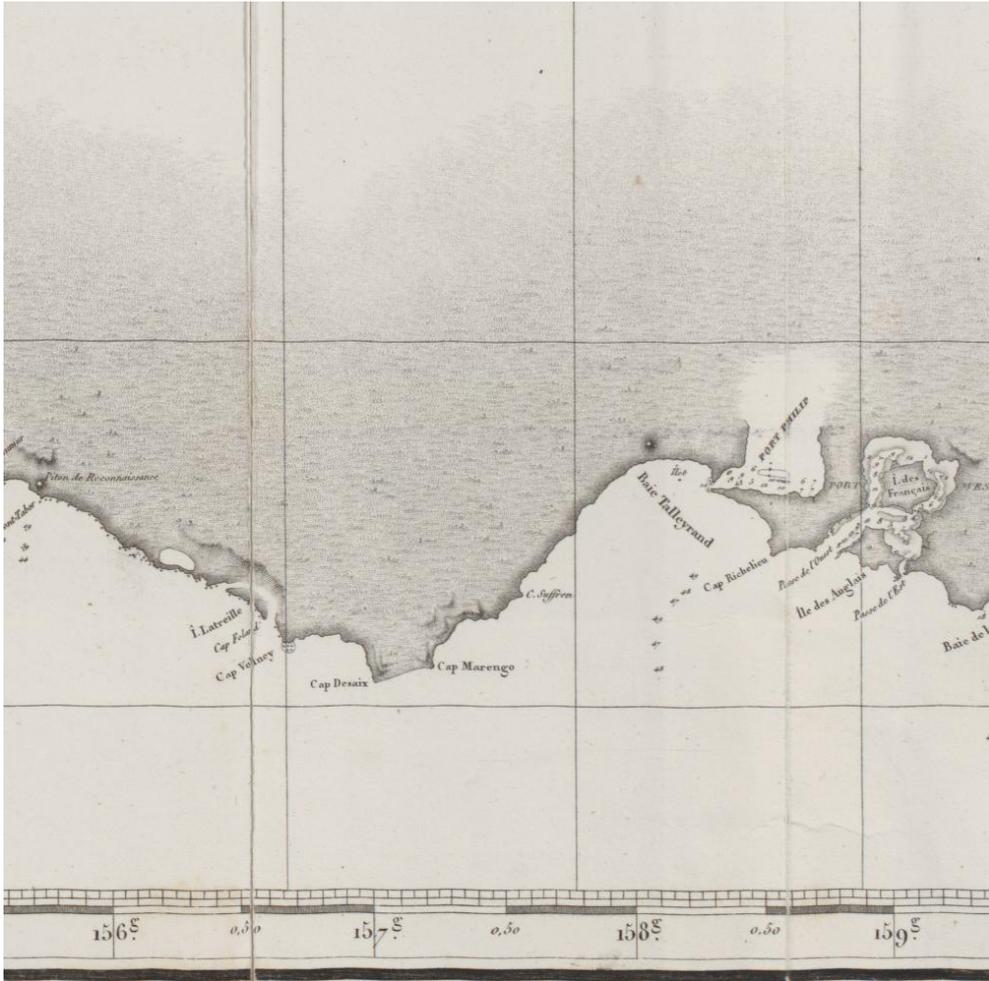


Plate 12

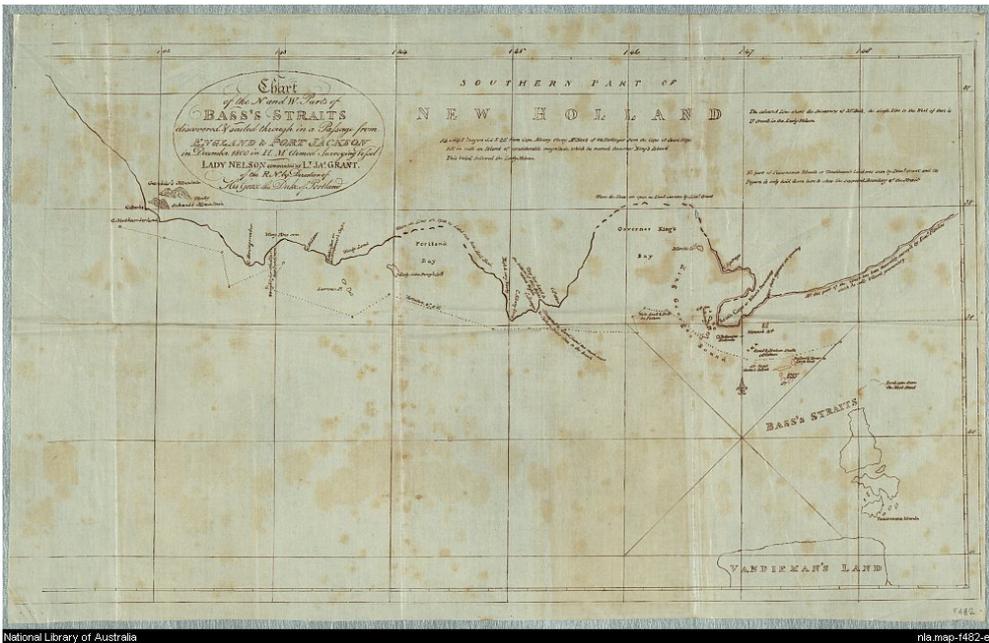


Plate 13

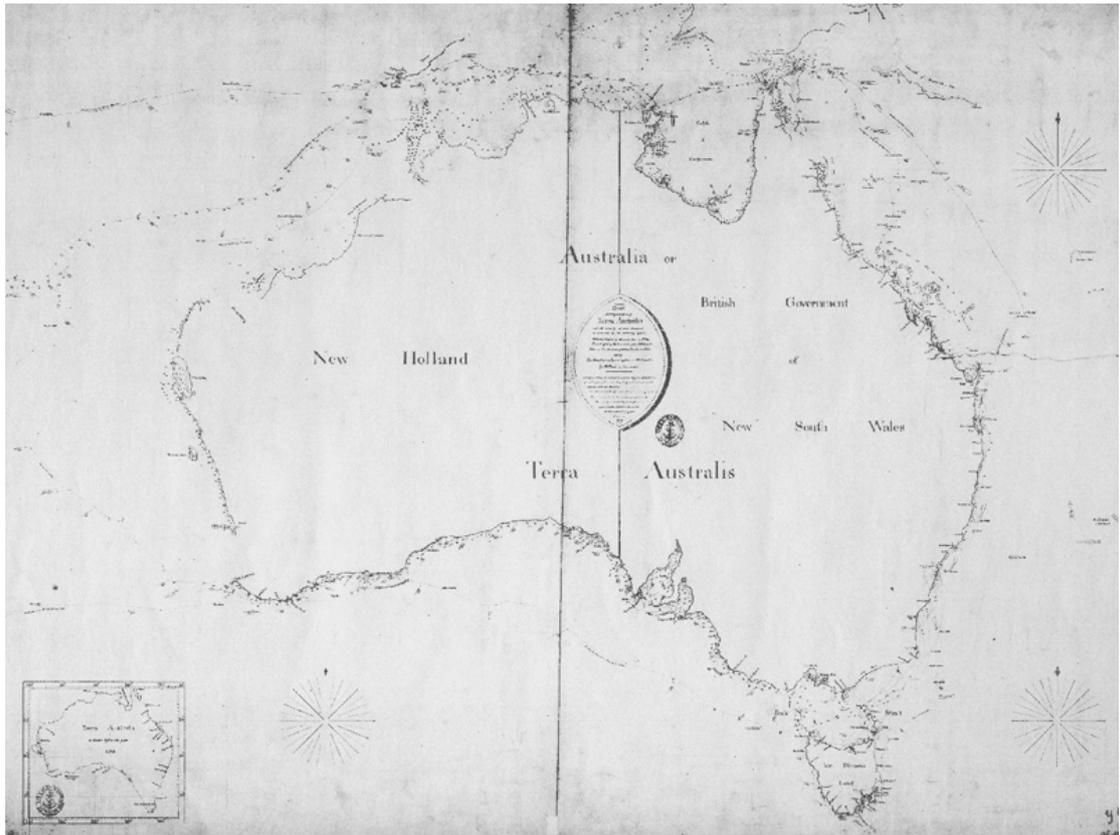


Plate 14

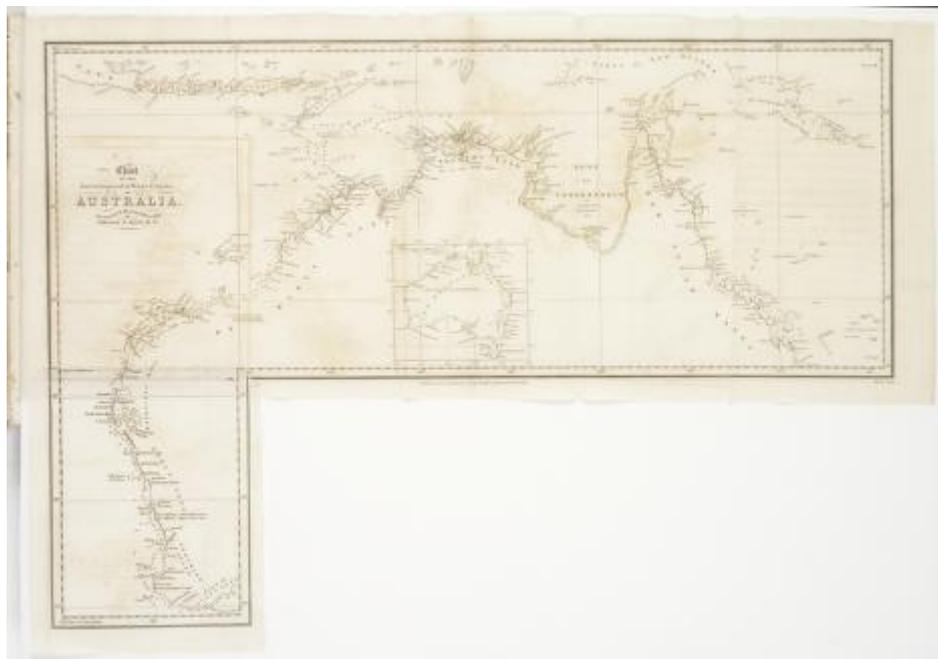


Plate 15



Plate 16