SHIPS IN COMPANY

The Second and Third Voyages

'The ablest and most renowned Navigator this or any country hath produced.'

Cook's EPITAPH BY ADMIRAL JOHN FORBES

Resolution and Adventure, 1772-75

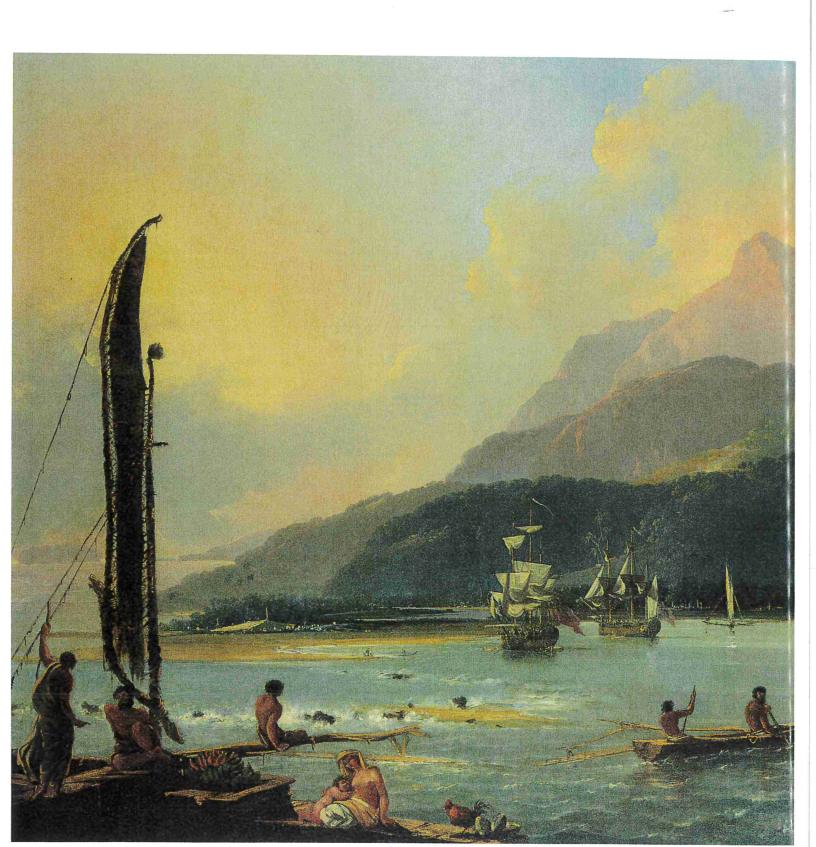
Banks was a well-known figure in society before he left England, but his triumphant return, with an epic story to tell in the highest circles and a scientific haul of lasting value, made him even more fêted than Cook. The more sober Admiralty was, however, well pleased with its man: its new First Lord, the highly intelligent John Montagu, fourth Earl of Sandwich, was henceforth Cook's most influential naval friend and quickly saw him promoted to commander. Unusually, he also received his new commission personally from the King, to whom Sandwich took him with his charts and plans, and with whom he had an hour's conversation.

With Alexander Dalrymple's influential *History* now in print, belief in the 'southern continent' was still strong and Cook's return to the region tended to raise rather than weaken confidence that it might be discoverable. Cook himself was sure that, if there, it had to be further south than so far envisaged and had already sketched a plan to resolve the question by embarking on a new voyage. This would not head west via the Horn but would sail east round the Cape of Good Hope, to quarter the southern Indian Ocean in the summer season, sped on their way by the high-latitude prevailing westerlies. After recouping in New Zealand, he would repeat the process in the southern Pacific at the start of the next summer. If nothing was found, a loop back north and west on the south-easterly prevailing winds might enlarge knowledge of islands, known and still unknown, in its central and western basin.

A VIEW OF MAITAVIE BAY [IN THE ISLAND OF] OTAHEITE [TAHITI] (detail); oil painting by William Hodges, 1776.

Resolution and Adventure are shown during Cook's second voyage, airing sails off Point Venus (left), where Cook first observed the

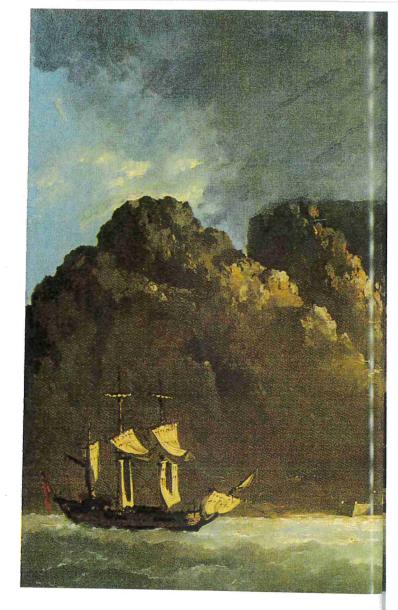
transit of Venus in 1769. He returned there on subsequent voyages. This large canvas is one of four Hodges did later for the Admiralty, with two of New Zealand (see p. 62) and one of New Caledonia (Vanuatu).



A VIEW OF THE CAPE OF GOOD HOPE TAKEN ON THE SPOT, FROM ON BOARD THE RESOLUTION, CAPTAIN COOKE (detail); oil painting by William Hodges.

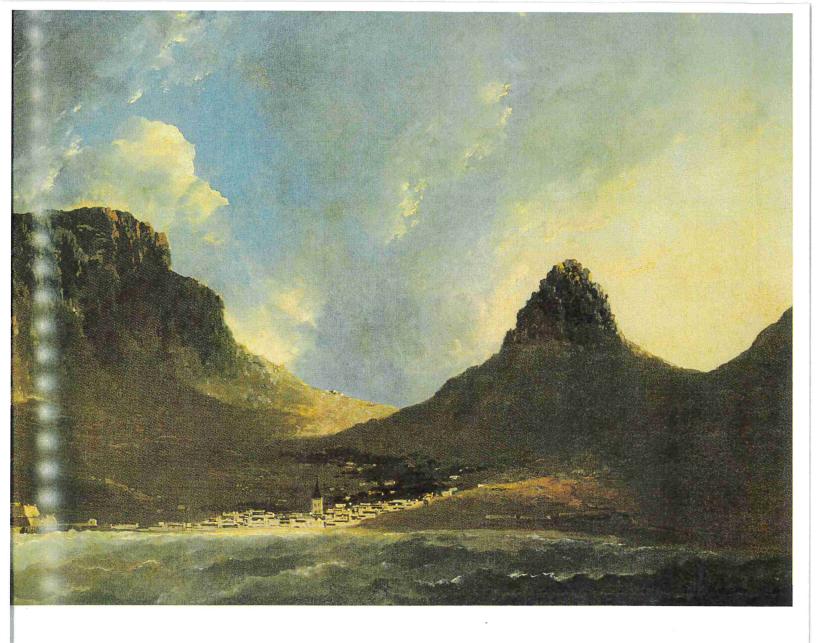
This picture was painted in November 1772, probably ashore in Cape Town, shipped directly home and exhibited at the Free Society of Artists in 1774. A related drawing by Hodges, possibly used for it, also survives (now in Australia).

As the French and Spanish were now hard on British heels to establish or reinforce Pacific claims, this was essentially the plan the Admiralty adopted. This time Cook recommended a twovessel expedition. Endeavour had firmly convinced him that only 'North Country built ships, such as are built for the coal trade' were suitable, and he chose the Marquis of Rockingham and the Marquis of Granby, both owned by Captain William Hammond of Hull. After purchase by the Navy Board, of which Cook's friend Palliser was Comptroller from 1770, they were respectively renamed the Resolution and the Adventure. Both were relatively new, and the former of 462



tons burthen; the latter, commanded by Lieutenant Tobias Furneaux (who had sailed with Wallis), of 340 tons.

Banks enthusiastically prepared to accompany Cook with an even larger party than before, including his botanist-librarian Daniel Solander; the astronomerphysician Dr James Lind; two reputable artists, Johann Zoffany and John Cleveley junior; and the draughtsmen brothers John and James Miller. However, the necessary extra accommodation added to the *Resolution* made her so unseaworthy that the Navy Board had it removed. Banks threatened to withdraw if his needs were not met, and when the Admiralty called his bluff, he felt obliged to do so, although his relations with Cook were only temporarily strained; he instead led most of his suite on a private foray to Iceland. It was a regrettable loss to Cook's company as much as to science, for Solander was replaced by the learned but difficult German naturalist Johann Reinhold Forster, accompanied by his gifted artist son, Georg. The latter generally proved an asset, but Forster senior strained



everyone's patience. Some of the crew of the *Endeavour* were back again among the *Resolution*'s crew of 112 (the *Adventure* had 81): Clerke (second lieutenant), Pickersgill (now third lieutenant) and Midshipman Isaac Smith were among them. George Vancouver, another midshipman, was later to win fame as an explorer himself, while the work of William Hodges, the sociable landscape painter who replaced Zoffany, was to define both this voyage and the dominant visual image we still have of the eighteenth-century Pacific.

The astronomers this time were William Wales (one of Banks's team) and William Bayly, the latter going with the *Adventure*. Both were appointed by the Board of Longitude, on which Maskelyne was the key figure as Astronomer Royal. Their prime task was to use lunar-distance observation, of which Maskelyne was a champion, to test the reliability of four new-fangled marine timepieces as a simpler alternative for calculating longitude at sea. One of these was Larcum Kendall's faithful 'K1' copy of John Harrison's great 'H4' prototype – 'our trusty friend the



'K1', Larcum Kendall's first copy (1769) of John Harrison's prototype marine timekeeper, 'H4' of 1759.

Chronometers revolutionised navigation at sea by providing the easiest method of determining longitude.

Watch', as the admiring Cook was later to call it – which was making its maiden voyage. The others were different and unsuccessful models by John Arnold. Their modern name of 'chronometer' stuck only after it was proposed in 1794 by Alexander Dalrymple.

The Resolution and Adventure expedition was Cook's greatest in terms of its sheer sea-keeping endurance, as a feat of navigation, and in its accumulation of geographical

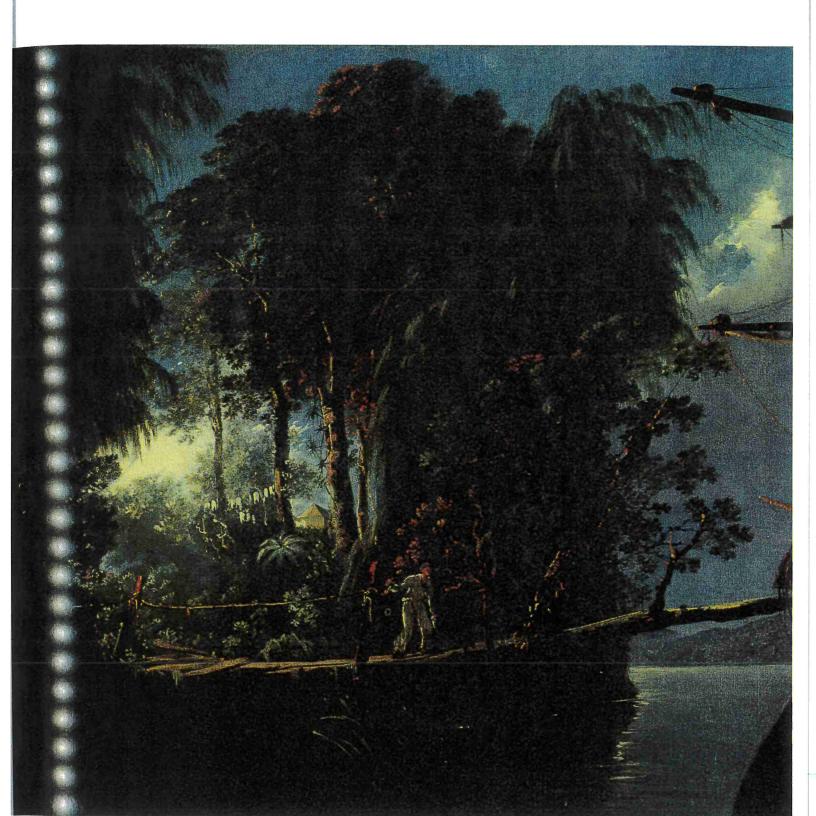
and related knowledge of Pacific islands until then unknown to Europeans, or at least uncharted by them. However, although longer and no less dangerous than the *Endeavour* voyage, this expedition lacked its two big landmarks – the surveys of New Zealand and eastern Australia – and it is only the overall pattern rather than the detail that can be summarised here.

The ships sailed from Plymouth on 13 July 1772, exactly a year after the Endeavour's return. As she had done, they replenished at Madeira and reached Cape Town on 30 October. Here Hodges painted the Adventure lying dwarfed below Table Mountain, on a big, breezy canvas which Cook left there for shipping home in an Indiaman. They sailed again on 22 November, heading south-east in search of 'Cape Circumcision' – a landfall reported in 1739 by the French voyager Bouvet de Lozier at latitude 54° south, longitude 10° 20' east. Instead they found a gale, cold and then ice, first in small quantities, and then vast fields of pack ice, and a new phenomenon – towering 'ice islands' (icebergs) up to 200 feet high. Early in January 1773 they made the important discovery that ice taken from round a berg melted down into fine drinking water. Rigging and sails froze, however; livestock brought from the Cape died and signs of scurvy began to appear. On 17 January they became the first men in history to cross the Antarctic Circle (66° 33' south). The following day, at latitude 67° 15' south, longitude 40° east, they turned back

VIEW IN PICKERSGILL HARBOUR, DUSKY BAY, NEW ZEALAND, APRIL 1773, by William Hodges, 1773–76.

Cook wrote that he moored the *Resolution* 'so near the shore as to reach it with a Brow or stage that nature had in a manner prepared for

us by a large tree, which growed in a horizontal direction over the water [and] reached our gunwale'. Wales's observatory tent can be seen through the trees. Hodges painted this over an earlier view of Antarctic icebergs seen shortly before, though exactly when is not certain.



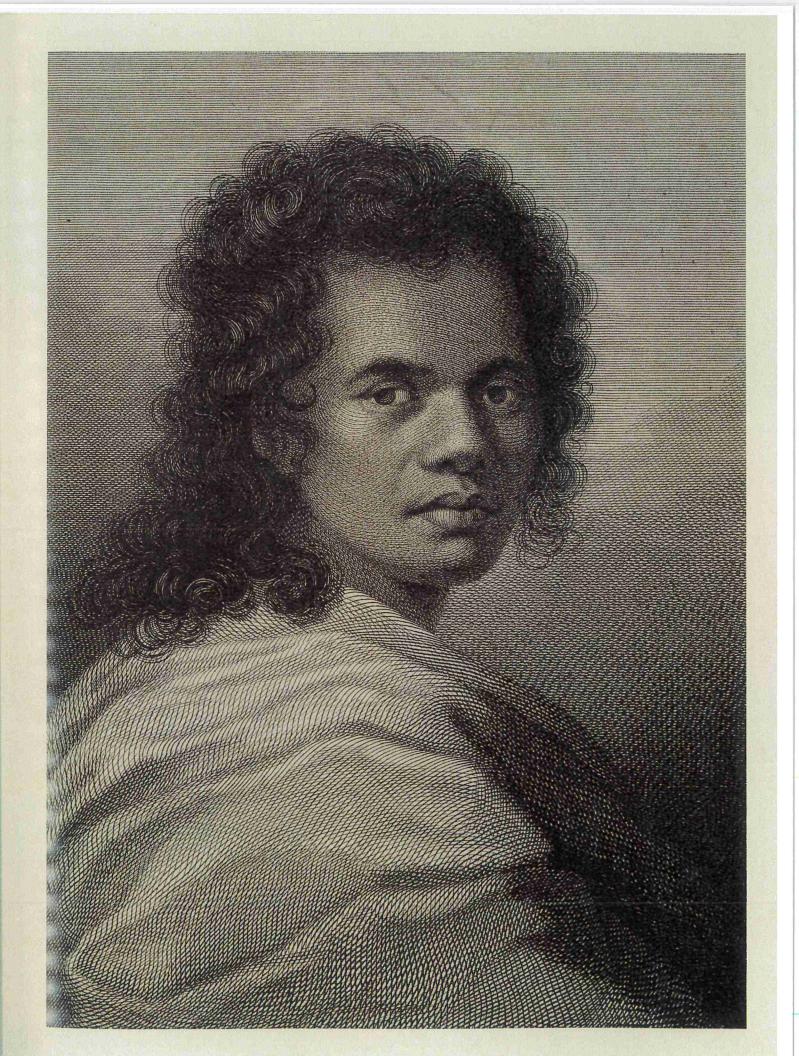
OPPOSITE OMAI; engraving by James Caldwall after William Hodges, 1777.

Mai was a young Raiatean islander taken back to Britain by Furneaux in the *Adventure*; there, he became an exotic minor celebrity. Part of the rationale for Cook's third voyage was to return him, and he was duly landed at Huahine in 1777, rich in gifts from his friends in Britain, including a horse and a suit of armour.

on a long dog-leg north and then on a sweep south-east again across the southern Indian Ocean, to New Zealand.

On 8 February the ships were separated in a gale and Cook arrived in beautiful Dusky Bay at the tip of South Island on his own, staying for seven weeks before moving to Queen Charlotte Sound on the Cook Strait, where he found Furneaux. The latter had touched on Van Diemen's Land and, although he had not resolved the question of whether it was joined to Australia, he discovered a small group of islands (now named after him) to the north-east. The southern winter was now beginning but Cook did not intend to sit this out. He halted Furneaux's preparations to do so and they both sailed again early in June 1773, in a great loop west and north to revisit Tahiti and the Society Islands, where they were warmly welcomed in August. Supplies at Tahiti proved short but were made up at Huahine, where the only major incident was the stripping to his trousers of Dr Anders Sparrman - the assistant the Forsters had recruited at the Cape - when he made a lone botanising foray, probably on to sacred ground. When they left on 17 September, Cook took with them a young man known as Odiddy (O-Hedidee) from Raiatea, dropping him back there in 1774. At Huahine, another islander called Mai begged Furneaux to let him join the Adventure so persistently that he took him on board: thus 'Omai', the first South Sea islander seen in England, steps into history and artistic celebrity - at least in portraits by Sir Joshua Reynolds and others.

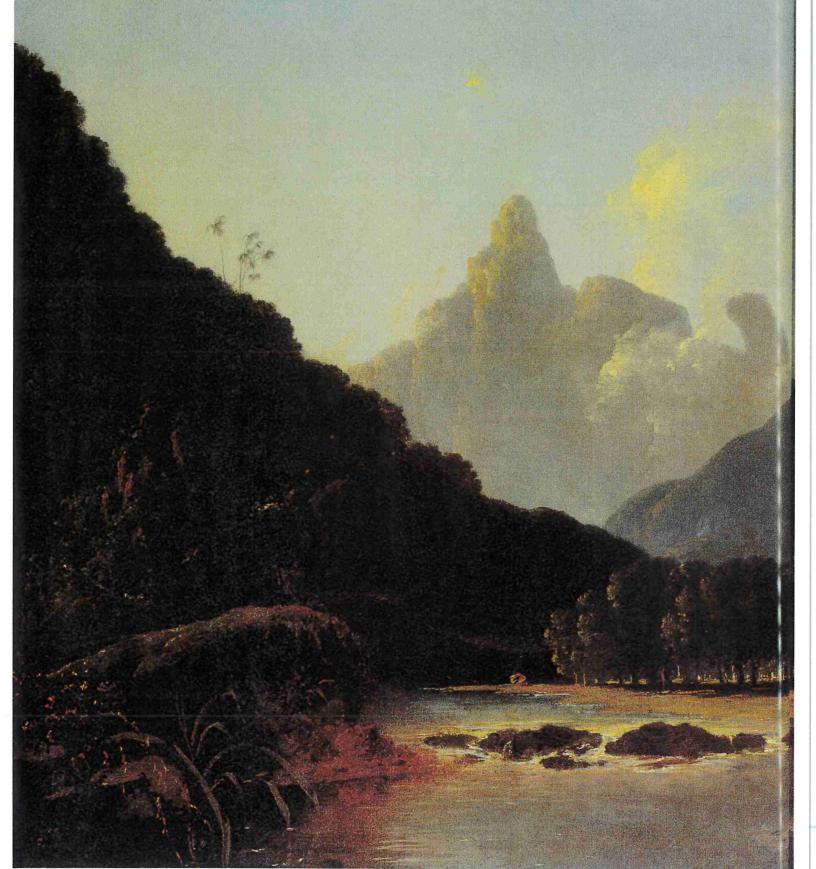
From the Society Islands, effectively Cook's central Pacific base, the expedition sailed west to locate islands that Tasman had called Amsterdam and Middelburg (Tongatapu and Eua) some 130 years earlier. These were sighted on 1 October. The people were perceived as being as light-fingered as the Tahitians and equally welcoming – though initially unwilling to trade – and Cook called the group the 'Friendly Islands' (otherwise known as Tonga). Red feathers obtained there were soon found to have so high a value elsewhere that Cook had to exert on-board 'exchange control' to prevent inhabitants of other islands from refusing to supply provisions in return for anything else. After a week both ships headed south for New Zealand again, where they were finally separated in a storm off the east coast at the end of October 1773 and did not see each other again during the voyage.

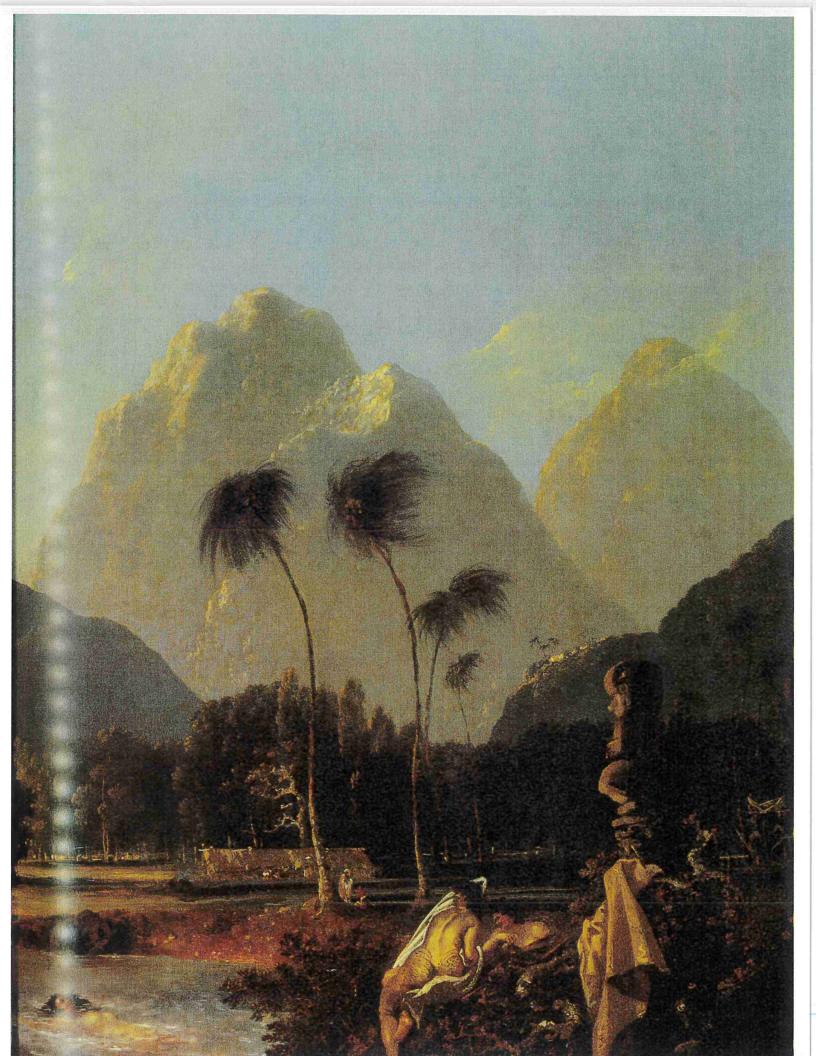


A VIEW TAKEN IN THE BAY OF OAITE PEHA [VAITEPIHA] OTAHEITE [TAHITI] (traditionally known as 'Tahiti Revisited'); oil painting by William Hodges, 1776.

Hodges painted this picture for the Admiralty after showing a previous version at the Royal Academy in 1776. Together with the romantic

setting and the eroticism of the tattooed Tahitian bathers, the menacing presence of the tii (an ancestor carving) and the tupapu (a burial platform) behind in the distance to the right evokes a traditional European artistic idea of et in Arcadia ego (I [Death] also exist in Paradise).





Cook reached the Ship Cove rendezvous in Queen Charlotte Sound on 3 November 1773 and prepared for a rapid departure for his second Antarctic sweep, taking advantage of the southern summer. While there, he found explicit proof of Maori cannibalism, in a shipboard experiment that Clerke rather light-heartedly initiated with gruesome and thought-provoking results. Nonetheless, Cook's general opinion of the Maori remained high, not least because he found them honest among themselves and not rivals to other islanders in terms of thievery. On 25 November he sailed, unable to wait any longer for Furneaux, but leaving him a buried and marked message of his intended movements.

Furneaux's outlook and shipboard regime were more conventional than Cook's and his record of sickness and adverse incident less impressive. Delayed on the coast of North Island by the weather, he made Queen Charlotte Sound early in December, six days after the *Resolution* left. From Cook's message he realised there would be little chance of finding him and, after a brief respite, he was about to sail for home when he lost a boat and crew sent on a foraging trip: a search soon discovered that the men had been killed and eaten by accompanying Maori. The facts came out only later, but there had been a sudden quarrel over food, during which a seaman had first shot two Maori. Furneaux buried the remains and quickly sailed for Cape Horn, searching for land in intense cold as far south as latitude 61° and continuing directly east across the south Atlantic to make another grasp for Bouvet de Lozier's 'Cape Circumcision'. This remained elusive and he concluded that the Frenchman had mistaken ice for land. He then made for Cape Town in March 1774. It was a creditable performance and the *Adventure* reached England on 14 July, having lost 13 men in all, though only one from among her many cases of scurvy.

Meanwhile, the Resolution had again headed south through gale conditions for the Antarctic. On 7 December 1773 her crew drank toasts to home at the exact antipodes of England, north of the great Antarctic bight which James Clark Ross would discover in 1841, and now known as the Ross Sea. However, as their latitude rose from 62° to 66° south they were increasingly ensnared by loose summer sea ice, massive bergs, fog, snow, intense cold and high wind. From latitude 67° 31' south, again beyond the Antarctic Circle, Cook prudently hauled north again for over 1,200 nautical miles until 11 January 1774, before making a final plunge south in deep-freeze conditions to the furthest point yet reached by man. Here, on 30 January, at latitude 71° 10', longitude 106° 54' west, he was stopped by solid ice stretching as far as the lookouts could see; had it been further east he would have been ashore in the mountains of Palmer Land, at the base of the 800-mile Antarctic Peninsula. Despite the presence of petrels and penguins, Cook was now convinced that if land lay beyond, it was completely ice-bound, adding: 'I who had ambition not only to go farther than any one had been before, but as far as it was possible for man to go, was not sorry in meeting with this interruption.' 'Ne plus

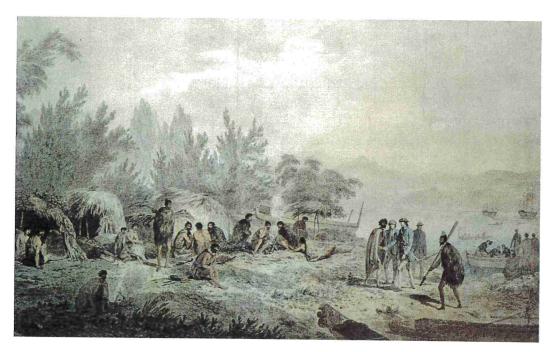
A VIEW OF THE MONUMENTS OF EASTER ISLAND (detail), painted (on panel) by William Hodges, *c.*1776.

Cook's *Resolution* touched briefly at Easter Island (Rapa Nui) in March 1774. Although fascinated by the astonishing statues, Cook reflected that no nation would ever contend for the honour of discovering the island.



ultra!' ('No further [has any man ever been]!') yelled young Vancouver – literally the furthest man south, out on the *Resolution*'s bowsprit – just as they turned north, leaving Antarctica itself for a future age to discover.

Having proved that no inhabitable southern continent existed, Cook would only have been using the discretion granted in his orders if he had headed home. Instead, with adequate stores, a healthy crew, a sound ship and vast areas of the central Pacific so little known to Europeans, he later wrote: 'I was of the opinion that my remaining in this sea some time longer would be productive of some improvements to navigation and geography as well other sciences.' Backed by his officers and the goodwill of his men, he launched north on a huge parabola, which by November 1774 would take him north to just below the Equator, west towards New Guinea, and then back south again to his favourite New Zealand base in Queen Charlotte Sound. The passage began with a violent storm, followed in February by serious illness for Cook himself, apparently a gall bladder and bowel problem, which caused great alarm. Fortunately he was nursed back to recovery by the surgeon, James Patten, aided by the only fresh meat still on board, the last of the edible Tahitian dogs. In March, the *Resolution* briefly visited the remote and deforested



SHIP COVE, QUEEN CHARLOTTE SOUND, NEW ZEALAND (detail); drawing by John Webber, 1777.

Queen Charlotte Sound, found on the *Endeavour* voyage, became a regular base, despite the killing and cannibalising there of a boat's crew from *Adventure* in 1773. Maori

on the move lived in temporary hut encampments and set one up at Ship Cove while Cook was there. He is shown greeting the group's chief, and he later wrote in his journal: 'Mr Webber has made a drawing of one of these Villages that will convey a better idea of them than any written description.'

Easter Island – first described in any detail in 1722 – of whose massive and mysterious stone figures Hodges later painted a remarkable picture. Circling north-east, Cook then rediscovered and fixed the position of the Marquesas Islands, found and named by Álvaro de Mendaña in 1595 but unseen since. This brought him back once more, via other minor landfalls, to Matavai Bay, Tahiti. The welcome was as enthusiastic as ever and the island seemed in a much more prosperous state than the previous year. Theft was just as bad and eventually, after the usual detentions of persons or property failed to be an effective remedy, Cook ceremonially flogged a Tahitian (as he did thieving seamen) to show he was both in earnest but also even-handed. He also witnessed a spectacular review of several hundred Tahitian war canoes, which were working up to attack nearby Eimeo (Moorea) in a local dispute. This too provided the subject of one of Hodges's most famous paintings – his largest Pacific canvas – *The War-Boats of the Island of Otaheite*, shown at the Royal Academy in 1777 (see pp.2–3).

From Tahiti they went on to the usual elaborate and generous welcome on Huahine and Raitaea (where Odiddy left them) and then west to relocate the islands of 'Austrialia de Espiritu Santo', first found by Pedro de Quirós in 1606, although more recently relocated by Bougainville and called the 'Great Cyclades'. Cook was to rename them the New Hebrides (now Vanuatu) and to chart them with great accuracy after he fell in with them in mid-July at Malekula, following other small discoveries and a stop for supplies at Nomuka, Tonga. The New Hebrideans, however, were Melanesians, a different race with a different language from his usual Polynesian friends: he thought them uglier, certainly cannibals and hostile - not surprisingly, since they believed the visitors to be ghosts. All attempts at friendship were met with propitiatory offerings which, when Cook misread their significance, were followed by some form of attack. Eating poisonous fish was another dangerous novelty here that often led to illness. On Erramanga the hostility repeated itself and the Marines had to open fire, wounding several islanders and killing their chief. It was not until Cook reached the bay he called Port Resolution, on the actively volcanic southern island of Tanna, that he was able to restock with wood and water in still edgy but not openly dangerous circumstances. On 25 August he finally anchored at Quirós' Espiritu Santo proper, the largest northern island in the New Hebrides, and completed his general survey of the chain by sailing round it.

At the end of the month, the *Resolution* sailed south for New Zealand, but on 4 September a large and unknown island was sighted, later found to be the fourth largest in the Pacific, running some 300 miles north-west to south-east. It reminded Cook of New South Wales and he eventually called it New Caledonia, spending most of the month surveying the eastern side. The people were prosperous and friendly, happy to supply water and to trade. More remarkably, they neither stole nor, in the women's case, could be persuaded to bestow sexual favours on Cook's

men, which gained the admiration of Cook and the puritanical J.R. Forster, at least. One nasty surprise was another poisonous fish, a small amount of which made Cook and the Forsters painfully ill, and which killed a pig that ate part of it. At the south end of New Caledonia, on the small Isle of Pines, they first mistook the huge trees for pillars of basalt, and had a near escape from wrecking the ship at night in the surrounding reefs as Cook tried to make the western coast. After that he reluctantly gave up any attempt to survey that side, resuming his course for New Zealand on 3 October. On the way he discovered and briefly landed on uninhabited Norfolk Island, and in mid-October the white volcanic cone of Mount Egmont, the north-western sentinel of the Cook Strait, again rose above the horizon.

On 18 October the *Resolution* once more anchored off Ship Cove again. Cook's message to Furneaux was missing and there were clear signs that the *Adventure* had come and gone. There were also unverifiable reports of Furneaux's casualties, although the local people assured Cook that the *Adventure* had left safely. Here, although very short of proper materials, Cook recaulked the ship and prepared for the last stages of the voyage. Wales, the astronomer, double-checked the longitude against an earlier result of Bayly's, and Cook, the perfectionist, was mortified to find that on the *Endeavour* voyage he had plotted South Island about 40 nautical miles too far east. More happily, he found that the accumulated error in the rate of Kendall's chronometer, after nearly a year at sea in all conditions, was a mere 19 minutes 30 seconds.

On 10 November 1774, in the high southern summer, the Resolution sailed east over the Pacific, crossing the tracks of her earlier passages in about latitude 55° south, just in case any land between had been missed. Cape Deseado, the western end of the Strait of Magellan, was sighted on 17 December. There were few provisions to be found on Tierra de Fuego, but after a cheerful Yuletide in Christmas Sound, the ship passed south towards Cape Horn, with Cook still making such coastal observations as conditions allowed. In the first week of January 1775 they were in the South Atlantic searching to just south of latitude 60° for a coastline predicted by Dalrymple, much of whose theorising had now been disproved by the voyage. When this also vanished into air Cook turned north, stumbling instead on what he first took for an ice island before it solidified into towering peaks of rock. Cook landed briefly on the desolate shore of Possession Bay and claimed the island as South Georgia, the future way station on Antarctic voyages undertaken by Shackleton and others. Conscientiously reasoning that where one island existed, Bouvet de Lozier's mysterious cape might also be nearby, he then briefly turned back to follow the 60th parallel eastward. This brought him one last discovery in the form of the small, remote and deserted South Sandwich Isles but took him south of the tiny speck of Bouvet Island, the hare which both he and Furneaux had so fruitlessly pursued. With the sight of a glacier calving on South Georgia and more bergs and broken pack ice floating north from



REVIEW OF THE WAR GALLEYS AT TAHITI (detail); oil painting by William Hodges, 1776.

On the *Resolution*'s return from its second island sweep, which had taken in Easter Island and the Marquesas, the officers and crew were

able to observe with professional interest a fleet of over 150 Tahitian canoes gathered for an attack on the neighbouring island of Moorea. This small painting of it was later engraved for the official voyage account.

the undiscovered Weddell Sea, Cook ended the voyage certain 'that there is a tract of land near the Pole, which is the Source of most of the ice which is spread over this vast Southern Ocean'. He was, however, correctly convinced that it lay largely within the Antarctic Circle 'for ever [...] buried under everlasting snow and ice' and also, quite wrongly, that it never could or would be explored.

On 21 March 1775, after a stormy northerly passage and exchanging news and messages with passing ships, the *Resolution* again anchored in hospitable Table Bay, and spent five weeks there as her rigging was refitted. She sailed on 27 April via St Helena, Ascension Island and Fernando de Noronha off the Brazilian Coast, and anchored at Spithead, Portsmouth, on 30 July 1775. The ship itself and Mr Kendall's timepiece had proved their worth through a voyage of over three years and 70,000 miles – well over twice round the world. Only four men on the *Resolution* had died: three by accident, one of disease, and none from scurvy.

WILLIAM HODGES AND THE RESOLUTION

Sydney Parkinson's illustrations of Cook's first Pacific voyage demonstrated the value of taking artists, even before the rather sensationally edited official account of it was published in 1773.

When Cook sailed again in 1772 he carried with him William Hodges (1744–97), 'a Landskip Painter', whom the Admiralty this time engaged 'to make Drawings and Paintings of such places in the Countries you may touch on ... as may be proper to give a more perfect idea thereof than can be formed from written descriptions only'. Hodges was thus the first official British expedition artist. The learned but difficult Johann Reinhold Forster went as the first official natural historian with his gifted son, Georg, as botanical draughtsman (from whom Banks later bought 568 drawings). Like Parkinson, Hodges was of modest origins: his father was a respectable London blacksmith off Piccadilly, who encouraged William's drawing talents under good tuition. In 1758 this gained him apprenticeship to Richard Wilson, a portraitist and pioneering landscape painter greatly influenced by French seventeenth-century classical masters such as Claude Lorrain. Hodges in turn acquired classical painterly ambitions, but his drawing training also made him an accurate recorder of coastal profiles, landscape views and incidents of the voyage. While he painted very few oil portraits (Cook's was among those he did), he nevertheless drew good ones of individual and often identified Pacific people, mainly in red and black chalk. He was probably recruited through Lord

Palmerston, an early patron, and was certainly the first oil painter to work in the Pacific, bringing back a number of atmospheric and mostly small pictures done on the spot. One of the earliest was a view of Antarctic icebergs made early in the voyage – the first-ever attempt at this subject – though now visible only as an X-ray image since he was clearly dissatisfied with it and painted it out, under his View in Pickersgill Harbour, Dusky Bay (p.63). Whether he did this in New Zealand or later is still uncertain, but Georg Forster also did a watercolour version of the same polar scene, probably under his guidance, and Midshipman John Elliott recorded that Hodges gave drawing instruction to others on board as well.

The influence of French classicism on Hodges is most clearly seen in View of Cape Stephens in Cook's Straits, with Waterspout – a real incident but compositionally modelled on Gaspard Dughet's Seascape with Jonah and the Whale, widely known from a print of 1748. Similar idealisation is seen in his other post-voyage works for the Admiralty, including small but complex figure subjects of Cook's landings in Melanesia. These were done for engraving in the official voyage account, which also included many of Hodges's more realistic drawings. The Pacific subjects that he exhibited in London from 1776 were only modestly

successful, despite his use of classical formulas to make them seem less alien to his audience. However, as the first colour representations of the Pacific, they laid the foundations for European notions of the South Sea as a place of sultry romance, mystery and menace in ways still familiar today through melodramatic film and tourism representations. From 1779 to 1783 Hodges worked in India – most notably for Warren Hastings, the governor of Bengal. Since India was already more familiar to the British than the Pacific, this brought him greater public success and led to his election as a full Royal Academician in 1789. In 1794, early in the

French Revolutionary War, his last project was to exhibit, and publish as engravings, two huge 'moral landscapes', The Effects of Peace and The Consequences of War. It proved disastrous, both commercially and then when the show was closed as subversive to the war effort by demand of HRH The Duke of York (who saw it as critical of his own poor record as an army field commander). Hodges sold up and retired to Devon, where he became partner in a small local bank. When this failed in a general crash early in 1797, he died and within six months his wife followed him, leaving six children 'in great want'.

right WILLIAM HODGES, after George Dance, 1810. This print is from a drawing of Hodges after he became a Royal Academician in 1789. It is one of a well-known series by Dance.

overleaf A VIEW OF CAPE STEPHENS IN COOK'S STRAITS, WITH WATERSPOUT, by William Hodges, 1776.

This large oil painting is of an incident that occurred in 1773 and is one of a set of four for the Admiralty. Hodges also did a more naturalistic drawing of it for engraving. Both versions show just one waterspout (in the foreground here) and three stages of its development.



