

**Finding the Right Track: Governor Phillip's Inland Exploration
from Manly towards Middle Harbour and Westwards: 15th to 18th
April, 1788.**

By Shelagh Champion and George Champion.

Published by the authors.
1990. Revised, 2006.

ISBN 0 9596484 6 1.

Acknowledgements:

We gratefully acknowledge the following:

Archives Office of New South Wales;

Mitchell Library, State Library of New South Wales;

New South Wales Department of Lands;

New South Wales Public Works Department – Manly Hydraulics Laboratory (Manly Dam);

University of New South Wales – Water Research Laboratory – Mr Ken Higgs (Manly Dam);

Royal Australian Historical Society – Mr Ken Murchison.

In writing this monograph, we have set aside all previous interpretations and conjectures regarding the first inland exploration made by Governor Phillip in search of land suitable for agriculture.

We have used the primary source material enumerated below, and have examined on foot the terrain that Phillip would have encountered. Many early maps have been examined, to establish the extent and nature of changes that have been made to the terrain during the last two hundred years.

Part one is concerned with our interpretation of the primary source material provided in Phillip's dispatch to Lord Sydney dated 15th May, 1788, Lieutenant William Bradley's hand-written journal *A voyage to New South Wales 1786-1792*, Surgeon John White's *Journal of a voyage to New South Wales*, Surgeon George Worgan's *Journal of a First Fleet surgeon*, Jacob Nagle's *The Nagle journal*, and the log of HMS *Sirius*, as well as the charts of Captain John Hunter dated 1788, and Lieutenant William Bradley.

Part two is a resumé of how we believe historians misinterpreted many aspects of the expedition.

Part One

Seaman Jacob Nagle was a member of Governor Phillip's boat crew. When this crew was not needed, Phillip used to send them out fishing at night. Nagle claimed that on one such excursion they found Middle Harbour, above the Spit:

Nagle: "On one of these excursions, one night shooting the seen [seine] at the head of Middle Harbour, as we supposed, and shifting a long a rising sandy beach towards

the north side, we found a narrow entrance, and going over the bank of sand, we discovered an other branch running to the westward, full of coves, though we were as far as this beach when surveying with the Governor but did not discover the entrance of this branch. When we return'd, we inform'd the Governor, and he came down, and it surveyed likewise."

Phillip: "In going to examine a Cove near the entrance of the Harbour (Shell Cove) I found a passage, that had not been observed by the Officers, when the rough Survey was made of the Harbour. Round a Sandy point, at the bottom of the Cove, was a passage with deep water into a branch of the Harbour, that runs to the Northwest..."

Bradley: "Thursday 10th [April 1788]: The Governor & party being in that part of the Harbour round Middle Cape, found an entrance round a long sandy point into a very extensive piece of water which branched away in three directions & good depth of water after having pass'd over the flat at the entrance."

Interpretation:

Following the discovery of Middle Harbour above the Spit by a fishing party, on 10th April Governor Phillip went to Shell Cove, near the Spit, and proceeding around this sandy point found the extension of Middle Harbour branching out in three directions. (See location map, p13.)

13th April, 1788

The following was recorded in the log of the *Sirius* (naval time has been adjusted to conventional time):

Sirius log: "Sunday April 13th ... AM. Capt Hunter Govr. And Sevral Officers went down the Harbour with ten Boats.

PM. Govr. Capt. Hunter &c Returned haven Discovered a part of the Harbour Not Kenowen befor."

Bradley: "Sunday 13th. The Governor went down the Harbour to visit the Coves in the lower part of it, He crossed the neck from the No. Cove & found at the end of the beach at the back of it a piece of stagnate brackish water."

Worgan: "April Sund. 13th: The Governor, & Captain Hunter accompanied by some other Officers, went on an Excursion down the Harbour, and made a Discovery of an Arm Inlet which led into an extensive Space of Water forming a fine spacious Harbour, they likewise fell in with some Water which they had Reason to suppose was a Lake."

Interpretation:

A large party in ten boats, led by Governor Phillip, went to look at the newly discovered arm. They also landed at present Manly Cove and explored far enough northwards to find some brackish, stagnant water which they thought further examination would show to be a lake. Clearly, they had found present Manly Lagoon.

14th April, 1788

Sirius log: "AM. Capt. Hunter Mr Bradly went Down to Eximine the New arm."

Bradley: "Monday 14th: Capt. Hunter traced the No.most branches of the Middle Harbour, to endeavour to know if they had any communication with that piece of water found yesterday, the No.most branch was found to end in a flat, dry at low water & about 2 miles above it a large run of fresh water."

Hunter: Plan of Port Jackson, New South Wales, 1788. (Note particularly 'Shell Cove' and the 'River of Fresh Water' at Middle Harbour Creek, as well as the 'flat' near Roseville Bridge.)

Interpretation:

Captain Hunter located the flat near Roseville Bridge and then pressed on to where the fresh water met the salt water at present day Bungaroo. (See location map, p13).

15th April, 1788

Bradley: "Tuesday, 15th: The Governor & party were landed in the No. Cove, for the purpose of going some distance into the Country & to examine that piece of stagnate water before mentioned."

Phillip: "... and finding on examining that there was a run of Fresh Water that came from the Westward, I went a few days after to examine its source. I landed with four days Provision, several Officers and a small party of Marines, and found to the Northward of this part of the Harbour a large lake, which we examined tho' not without great labour, for it is surrounded by a bog and large Marsh, in which we were frequently up to the middle; here we saw a black Swan, it was larger than the common Swan and when it rose, after being fired at the wings appeared to be edged with white, there is some red on the bill, and it is a very noble bird."

White: "1788. April 15. His excellency, attended by Lieutenant Ball of the navy, Lieutenant George Johnston of the marines, the judge advocate, myself, three soldiers, and two seamen, landed in Manly Cove (so called from the manly conduct of the natives when the governor first visited it), on the north side of the entrance to Port Jackson Harbour, in order to trace to its source a river, which had been discovered a few days before."

White: "We, however, found this impracticable, owing to a thicket and swamp which ran along the side of it. The Governor, anxious to acquire all the knowledge of the country in his power, forded the river in two places, and more than up to our waists in water, in hopes of being able to avoid the thicket and swamp; but, not withstanding all his perseverance, we were at length obliged to return, and to proceed along the sea-shore, a mile or two to the northward. At the end of this we fell in with a small salt-water lagoon, on which we found nine birds that, whilst swimming most perfectly resembled the *rara avis* of the ancients – a black swan. We discharged several shot at them, but the distance was too great for execution. Our frequent firing, however, caused them to take wing, and they flew towards the sea, which was very near, in the order that wild geese generally preserve; the one before the other."

Interpretation:

The objectives of the exploration now become clearer. Phillip stated an intention to examine and trace to its source the 'large run of fresh water' (Middle Harbour Creek) discovered by Hunter on 14th April. Bradley stated that they also intended to go some distance into the country and to examine the stagnant water found on 13th April. Governor Phillip's intentions then were first, to examine the piece of stagnant water (present Manly Lagoon), secondly to explore the land between Manly Cove and Middle Harbour, and thirdly to examine Middle Harbour Creek. The identification of Middle Harbour Creek as the river that Phillip intended to follow is confirmed by Bradley's journal entry of 17th April.

Bradley said he landed the party "in the No. Cove", and the next day (16th April), "A Boat went to the No. Cove to bring this party back should they return: while the Boat was laying there we walked across the neck, where some Canoes were just landing which they did with ease altho' a very great surf was running, they met us & walked over with us to the place where our Boat was laying, they staid with us half an hour, several Women appear'd at a distance but would not come to us." This was clearly present day Manly.

Having landed at present Manly Cove, the exploring party soon became bogged down in the swamps beside Burnt Bridge Creek, that have since been reclaimed. White said they were 'at length obliged to return', that is, to go back the way they had come, '... and to proceed along the sea-shore, a mile or two to the northward. At the end of this [ie this sea-shore, or beach] we fell in with a small salt-water lagoon.' This was Manly Lagoon, which meets the sea at Queenscliff, approximately a mile from where they had first landed.

Phillip said they 'found to the Northward of this part of the Harbour [ie Manly] a large lake... surrounded by a Bog and large Marsh.' As neither Phillip nor White mentioned any other lake or lagoon on this expedition they were most probably talking about the same piece of water, that is, Manly Lagoon. Whether the lagoon was large or small became a matter of judgement for the explorers. It should also be noted that the present Manly Lagoon (in 1884 called Curl Curl Lagoon) was considerably larger in surface area before dredging and reclamation took place over a number of years around the 1920s.

Phillip and White both mentioned seeing black swans which were fired at. They were evidently describing the same occasion.

15th April 1788 (continued)

White: "We rounded this lagoon and proceeded four or five miles westward, along the banks of a small fresh-water river, which emptied itself into it, and had for its source only a swamp, or boggy ground. After we had passed this swamp, we got into an immense wood, the trees of which were very high and large, and a considerable distance apart, with little under or brush wood. The ground was not very good, although it produced a luxuriant coat of a kind of sour grass growing in tufts or brushes, which, at some distance, had the appearance of meadow land, and might be mistaken for it by superficial examiners. Here we pitched out tents (without which the governor never travelled) for the night, near a swamp, out of which we were supplied with water, not, indeed either of the best or clearest kind. The night being cold, and a heavy dew falling, we kept up a large fire before the tents, which, though in one respect an excellent precaution, far from chasing away, seemed to allure the mosquitoes, which tormented us inexpressibly during the whole night."

Interpretation:

White said, "We rounded this lagoon, and proceeded four or five miles westward, along the banks of a small fresh-water river, which emptied itself into it." As the only creek in the area which meets the criterion stated by White is Curl Curl Creek (now called Manly Creek below Manly Dam, but still Curl Curl Creek above the dam) the party must have turned inland on the north side of Manly Lagoon, along the higher land of Queenscliff, in pursuit of their original stated objectives. After crossing somewhere near present Kentwell Road, which according to the parish map of Manly Cove dated 1884 was not a heavy swamp area, they would then have followed Curl Curl Creek inland for approximately the distance stated by White (ie four or five miles). A plan of the watershed for Manly Dam dated 12.2.1887, before the dam was constructed, indicates that there were no significant swamps in the Curl Curl Creek valley area which would have impeded their progress.

The source of Curl Curl Creek was found to be a swamp, or boggy ground. Next White said, "we got into an immense wood, the trees of which were very high and large, and a considerable distance apart." By now they were in French's Forest. (See location map, p13.)

The exploring party camped that night in the immense wood, apparently near the head waters of Curl Curl Creek.

16th April, 1788

White: "16th. We pursued our route westward, proceeding many miles inland, without being able to trace, by a single vestige, that the natives had been recently in those parts. We saw, however, some proofs of their ingenuity, in various figures cut on the smooth surface of some large stones. They consisted chiefly of representations of themselves in different attitudes, of their canoes, of several sorts of fish and animals; and, considering the rudeness of the instruments with which the figures must have been executed, they seemed to exhibit tolerably strong likenesses. On the stones, where the natives had thus been exercising their abilities in sculpture, were several weather-beaten shells. The country all around this place was rather high and rocky; and the soil arid, parched, and inhospitable.

"In the evening, after a long and fatiguing march, we fell in with the north-west branch of Port Jackson Harbour. Here the two seamen, overcome with fatigue, and having their shoes torn from their feet through the ruggedness of the road along which we had travelled, could proceed no further. This circumstance induced the governor to consign them to the care of Lieutenant Ball, and a marine, supplying them with provisions to last them till they reached the ships. His excellency, with the rest of the party, pushed on to the westward, by the water side, in hopes of finding better land, and a more open country. About four o'clock in the afternoon we came to a steep valley, where the flowing of the tide ceased, and a fresh-water stream commenced. Here, in the most desert, wild and solitary seclusion that the imagination can form any idea of, we took up our abode for the night; dressed our provisions, washed our shirts and stockings, and turned our inconvenient situation to the best advantage in our power."

Interpretation:

On this day, 16th April, White described in detail some Aboriginal engravings which they had seen, together with a description of the location. The description of both the group of engravings and their location matches that of the well-known group of

engravings at the side of Bantry Bay Road, French's Forest, on the ridge to the west of Curl Curl Creek head waters. We do not know of any other engravings in this area which in particular depict canoes, and which match in general White's description. Palaeontologist R Ethbridge jr, writing in 1890, identified canoes in this group of engravings.

In the evening (the word 'evening' can mean the period of day after midday), they fell in with Middle Harbour. Lieutenant Ball, a marine and two fatigued seamen here left the main party to return to Sydney Cove via the North shore. Apparently crossing Middle Harbour was no problem for them. Low tide was at 11.16 am on that day¹. Bradley told us on 14th April that Hunter found the flat near present day Roseville Bridge (see location map, p13) to be dry at low water and this is probably where they crossed. It should be noted that the sand which formed the flat near Roseville Bridge has been extensively dredged and removed over the years so that it is now no longer apparent. Rowing boats before dredging took place were often physically pushed across the flat near low tide, and the sand was fairly firm.

The main party continued along the water side of Middle Harbour until about four o'clock in the afternoon, when they reached the fresh water stream at Bungaroo, and here they camped for the night. (See location map, p13.)

17th April, 1788

White: "The next morning we hid our tents and the remains of our provisions, and with only a little rum, and a small quantity of bread, made a forced march into the country, to the westward, of about fourteen miles, without being able to succeed in the object of our search, which was for good land well watered. Indeed, the land here, although covered with an endless wood, was better than the parts which we had already explored. Finding it, however, very unlikely that we should be able to penetrate through this immense forest, and circumstanced as we were, it was thought more prudent to return. We, accordingly, after the expeditious walk, reached the stream from whence we had set out in the morning, and taking up the tents and provisions which we had left, proceeded a little farther down, to the flowing of the tide, and there pitched our tents for the night; during which it rained heavily, with thunder and lightning."

Phillip: "With great labour in three days we got round the Swamps, & Marshes from which all the fresh water drains that this Harbour is supplied with. The Country we past thro' when we left the low Grounds, was the most Rocky, and barren I ever saw; the ascending and descending on the Mountains, being practicable only in particular places, but covered with flowering Shrubs. And when about fifteen Miles from the Sea Coast, we had a very fine View of the Mountains inland, the Northernmost of which I named Carmarthen Hills, and the Southernmost Lansdown Hills. A Mountain between I called Richmond Hill and from the rising of these Mountains, I did not doubt but that a large River would be found."

Bradley: "Thursday 17th. Lieut. Ball with some of the Governor's party crossed the Branches of Middle Harbour & returned to the No. shore opposite to Sydney Cove; they left the Governor at the No. most branch leading to a large run of water up which they meant to go the next day. Mr Ball found all the Country he crossed to be a jumble of rocks & thick woods, except one small spot about a mile to the NW of the place he came to."

¹ Flinders Institute for Atmospheric and Marine Sciences.

Interpretation:

Instead of tracing Middle Harbour Creek to its source, as originally intended, a forced march westwards was undertaken on 17th April. Phillip claimed that “when about fifteen Miles from the Sea Coast, we had a very fine View of the Mountains inland”. White agreed approximately with Phillip’s distance, provided he also meant from the coast, when he said “about fourteen miles”. Unfortunately the primary evidence does not allow us to be certain which point was reached on this forced march.

The party returned to Bungaroo and camped here again, though a little further down.

18th April, 1788

White: “18th. We began our progress early in the morning, bending our course down the river. Some places along the shore, where the tide had flowed so as to obstruct our passage, we were obliged to ford; and, at times, we were under the necessity of climbing heights nearly inaccessible. At length, after undergoing much fatigue, we were agreeably surprised, and cheered, with the sight of two boats, sent by Captain Hunter to meet us and just then coming up with the tide. By them we learnt, that Lieutenant Ball, with his enfeebled party, had arrived safe at the ship the day after they had quitted us. We all went on board the boats, and fell down the river till we got to a pleasant little cove, where we dined, with great satisfaction and comfort, upon the welcome provisions which were sent in the boats by the governor’s steward. After having refreshed ourselves, we again embarked, and about six o’clock in the evening arrived in Sydney Cove.”

Bradley: “Friday 18th. Went up the No. Branch of the Middle Harbour to meet the party which we did just below the Flats. The Governor had traced the run of water some miles found the Country in general Rocks & Woods, the peice of water near the Sea they found to be a stagnate pool into which the Sea breaks over the Shore in bad weather.”

Interpretation:

Lieutenant Ball having safely reached Sydney Cove, described where the main party was, and Captain Hunter sent two boats up Middle Harbour to meet it just below the flats near Roseville Bridge. Once on board the boats, they found a pleasant little cove where they dined. The party arrived back in Sydney Cove about six o’clock in the evening.

Summary of Part One

Phillip and his party had stated objectives for their expedition. They successfully examined the country from Manly Lagoon, through French’s Forest, to the upper reaches of Middle Harbour, where the run of fresh water at present day Bungaroo is located. By going some miles westward from this point they saw in the distance the Blue Mountains, which suggested to Phillip the presence of a large river and land suitable for farming.

Part Two

Governor Phillip sent his first dispatch to Lord Sydney, in England, on 15th May, 1788, and almost immediately upon receipt in England John Stockdale of Piccadilly compiled *The voyage of Governor Phillip to Botany Bay* from authentic papers obtained from several Departments, to which were added the journals of Lieutenants Shortland, Watts and Ball, and Captain Marshall. This was published in London in 1789, but Stockdale gave misleading and confusing information which made it hard for historians to obtain a clear picture of Phillip's exploration from Manly on 15th April, 1788, when he stated, "They landed at the head of a small cove, called Shell Cove, near the entrance of the harbour on the north side. Proceeding in this direction they arrived at a large lake, which they examined, though not without great labour."

This inaccurate statement by Stockdale misled George Burnett Barton, in his *History of New South Wales, from the records*, published in 1889, into having the party "Landing at Shell Cove, between Manly Beach and the North Head." He confused present Shelly Beach with Shell Cove near the Spit. He also assumed that the large lake mentioned by Phillip was Narrabeen Lake. Although Barton had Phillip's original dispatch, and was supposed to be using this and other records to compile his history on the occasion of the centenary of New South Wales, he apparently preferred to rely on Stockdale.

In 1892 the *Historical Records of New South Wales*, edited by Alexander Britton, were published. The account this time was in Phillip's own words, although not complete. Britton still identified, by a note in the margin, the lake, or more correctly the lagoon, mentioned by Phillip, as Lake Narrabeen. However, this lagoon does not conform with the distance stated in White's journal.

The Historical Records of Australia, edited by Frederick Watson and published in 1914, set out the same account as the *Historical Records of New South Wales*, but in his notes Watson identified the lake as Dee Why Lagoon. This lagoon does not conform with the distance stated in White's journal either.

Frederick Watson seems to have been well aware of some of the mishaps that occur in the recording and interpretation of history. In his preface to the *Historical Records of Australia*, volume 1, he said, "The corruptions which occur in the printed histories may be traced to various causes. Pre-eminent amongst these in the histories of intermediate and more recent date is the acceptance of a statement by a single early author without comparison of the statements of his contemporaries on the same subject. In this way a superstructure of history has been built on an insecure foundation and the reliability of the subsequent conclusions naturally falls short of what is necessary."

Dawes' map of 1791 further added to the confusion of researchers when it incorrectly showed the exploring party setting out from present North Harbour Reserve instead of present Manly Cove.

Meanwhile, in the Free Public Library, Sydney (now the State Library of New South Wales) a copy of Surgeon John White's *Journal of a voyage to New South Wales*, published in 1790, had lain on the shelves since 1887 or even earlier, as it is listed in that library's printed catalogue covering the years 1869 to 1887. In relation to the expedition from Manly, this journal seems to have been overlooked until about 1925. Professor G A Wood, in his 1926 article, "Explorations under Governor Phillip", used Phillip's and White's accounts. The manuscript of Bradley's journal, *A voyage to New South Wales, 1786-1792*, was purchased by the Mitchell Library in August 1924, but there is no evidence in Wood's article that he had seen it. Wood relied entirely on the opinion of J F Campbell, who identified the lagoon as Harbord Lagoon (now Curl Curl Lagoon) and the creek as Greendale Creek. However, the length of this creek does not conform with the distance stated in White's journal.

The article written by Professor Wood enticed other historians to adopt Harbord Lagoon (now Curl Curl Lagoon) and Greendale Creek as the route taken, in preference to Manly Lagoon and Curl Curl Creek, which in the main comply with the primary evidence. It was a simple case of one historian following another.

Once Phillip and his party had reached the high ground at Queenscliff, it would have been time-consuming, arduous and unnecessary for them to have pressed on to present day Curl Curl Lagoon. We have closely examined the terrain on foot, and find it difficult to believe that Phillip would have traversed another beach, another headland, and a third beach, to arrive at Curl Curl Lagoon and consequently Greendale Creek.

In 1929 the Manly, Warringah and Pittwater Historical Society erected a cairn on the top of Beacon Hill "to commemorate the first overland journey of Governor Phillip from Manly towards Pittwater, 15th April 1788." Apparently members of the Society were still under the misapprehension that Phillip was exploring between Manly and Pittwater, whereas the expedition was of course towards Middle Harbour.

In 1931 the summit of Beacon Hill was officially named Governor Phillip Lookout. The cairn and the name appear to have misled many people into thinking that Governor Phillip and his party climbed Beacon Hill. However there is not a shred of evidence to support such a claim. At no time did Phillip say that he saw a large lake from the top of a hill. He did say that he found a large lake which was surrounded by a bog and large marsh, and that the party examined it, "tho' not without great labour". The immense wood which the explorers entered after following a fresh-water creek westerly was at French's Forest. There was no immense wood on or near Beacon Hill.

It is interesting to note that cartographers contemporary with Phillip, for example, Hunter, Bradley and Dawes, omitted present day Curl Curl Lagoon (formerly Harbord Lagoon) from their maps. The entrance to Manly Lagoon is shown, at the end of the beach at Queenscliff, likewise the entrance to Dee Why Lagoon, unmistakably next to Long Reef. Curl Curl Lagoon (formerly Harbord Lagoon) was evidently now a notable landmark.

More recently, the original accounts of the expedition have been reprinted, making them more widely available as primary source material. John White's journal was reprinted in 1962, John Hunter's journal in 1968, and William Bradley's journal was published in facsimile edition in 1969. *The voyage of Governor Phillip to Botany Bay* was reprinted in 1970. In place of the last mentioned, we would like to recommend to readers the *Official account through Governor Phillip's letters to Lord Sydney*, edited by G R Tipping and published in 1988. This gives a little more information regarding the discovery of Middle Harbour above the Spit.

In our opinion many historians did not interpret the primary source material correctly. Consequently much conjecture, which has later turned out to be wrong, has appeared in publications and on monuments.

Bibliography

1. Contemporary material

Bradley, William: *A voyage to New South Wales, 1786-1792*. Facsimile edition. Sydney: Trustees of the Public Library of New South Wales, 1969.

Historical Records of Australia. Series 1, Volume 1, 1788-96, ed by Frederick Watson. Sydney: The Library Committee of the Commonwealth Parliament, 1914.

Historical Records of New South Wales. Volume 1, Part 2, Phillip, 1783-1792, ed by Alexander Britton. Sydney: Government Printer, 1892. Facsimile reprint, 1970.

Hunter, John: *An historical journal of events at Sydney and at sea, 1787-1792*, ed by John Bach. Sydney: Angus & Robertson in association with the RAHS, 1968. (Originally published 1793).

Log of the proceedings of His Majesty's Ship Sirius, Captain Arthur Phillip Commander, commencing the 25th of October 1786 and ending the 31st of August 1788 both inclusive. Bonwick Transcripts. Phillip Papers, Vol.4, No.317. (Mitchell Library MS BT 4b Ser.2).

Nagle, Jacob: *The Nagle journal: a diary of the life of Jacob Nagle, sailor, from the year 1775 to 1841*, ed by John C Dann. New York: Weidenfeld & Nicolson, 1988.

Official account through Governor Phillip's letter to Lord Sydney, ed by g R Tipping. Sydney: the editor, 1988.

The voyage of Governor Phillip to Botany Bay. London: John Stockdale, 1789.

White, John: *Journal of a voyage to New South Wales*. London: J Debrett, 1790.

Worgan, George Bouchier: *Journal of a First Fleet surgeon*. Sydney: The Library Council of New South Wales in association with the Library of Australian History, 1978.

Maps

Dawes, William: A map of all the parts of the territory of New South Wales which have been seen by any person belonging to the settlement established at Port Jackson, in the said territory. March 1791. Published in Hunter's journal.

Hunter, John: Chart of the coast between Botany Bay and Broken Bay, surveyed in 1788 and 89. Published in Hunter's journal.

Hunter, John: Plan of Port Jackson, New South Wales, 1788. Published in The voyage of Governor Phillip to Botany Bay.

2. Contributing material

Barton, George Burnett: *History of New South Wales, from the records*. Vol.1, Governor Phillip, 1783-1789. Sydney: Government Printer, 1889.

Campbell, W D: *Aboriginal carvings of Port Jackson and Broken Bay*. 1899.

Champion, Shelagh, and Champion, George: *Forest history*. 3rd ed. Killarney Heights, the authors, 1988.

Etheridge, R, jnr: "The Aboriginal rock carvings at the head of Bantry Bay, Middle Harbour, Port Jackson." *Geological Survey of NSW Records*, Vol.2, 1890.

Flinders Institute for Atmospheric and Marine Sciences. *The Tidal Laboratory: Australia, East Coast – Sydney (Fort Denison): times and heights of high and low waters, 1788.* (Our copy by courtesy of Ken Murchison.)

McCarthy, F D: Aboriginal rock engravings near main roads in the County of Cumberland. *Main Roads*, June 1954, p105-112.

Wood, G A, and Campbell, J F: Explorations under Governor Phillip. *RAHS Journal and Proceedings*, Vol.12, Part 1, 1926, p1-40.

Maps

Manly Cove, 1835 Map no. AO240. (Archives Office of NSW).

Manly Waterworks: Plan of watershed, 12-2-1887.

New South Wales. Lands Department. Survey of a part of Middle Harbor together with a road and 7 allotments, Parish of Manly Cove, County of Cumberland, 1856.

Parish of Manly Cove, 1884. (Mitchell Library).



