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A Voyage Towards The South Pole, And Round The World

Performed In His Majesty's Ships the Resolution and Adventure, In the
Years 1772, 1773, 1774, and 1775 ; In Two Volumes

**Cook, James
Furneaux, ...**

London, 1777

Chap. XI. Sequel of the Passage from New Caledonia to New Zealand,
with an account of the Discovery of Norfolk Island; and the Incidents that
happened while the Ship lay in Queen Charlotte's Sound.

urn:nbn:de:gbv:45:1-2228

C H A P. XI.

Sequel of the Passage from New Caledonia to New Zealand, with an account of the Discovery of Norfolk Island; and the Incidents that happened while the Ship lay in Queen Charlotte's Sound.

1774.
October.
Thursday 6.

THE wind continuing at S. W., W. S. W., and West, blowing a fresh gale, and now and then squalls, with showers of rain, we steered to S. S. E., without meeting with any remarkable occurrence till near noon on the 6th, when it fell calm. At this time we were in the latitude of $27^{\circ} 50'$ S., longitude $171^{\circ} 43'$ East. The calm continued till noon the next day, during which time we observed the variation to be $10^{\circ} 33' \frac{1}{2}$ East. I now ordered the carpenters to work to caulk the decks. As we had neither pitch, tar, nor rosin, left to pay the seams, this was done with varnish of pine, and afterwards covered with coral sand, which made a cement far exceeding my expectation. In the afternoon, we had a boat in the water, and shot two albatrosses, which were geese to us. We had seen one of this kind of birds the day before, which was the first we observed since we had been within the tropic. On the 7th, at one P. M. a breeze sprung up at South; soon after it veered to, and fixed at S. E. by S., and blew a gentle gale, attended with pleasant weather.

Friday 7.

Saturday 8.

We stretched to W. S. W., and next day at noon were in the latitude of $28^{\circ} 25'$, longitude $170^{\circ} 26'$ East. In the evening,



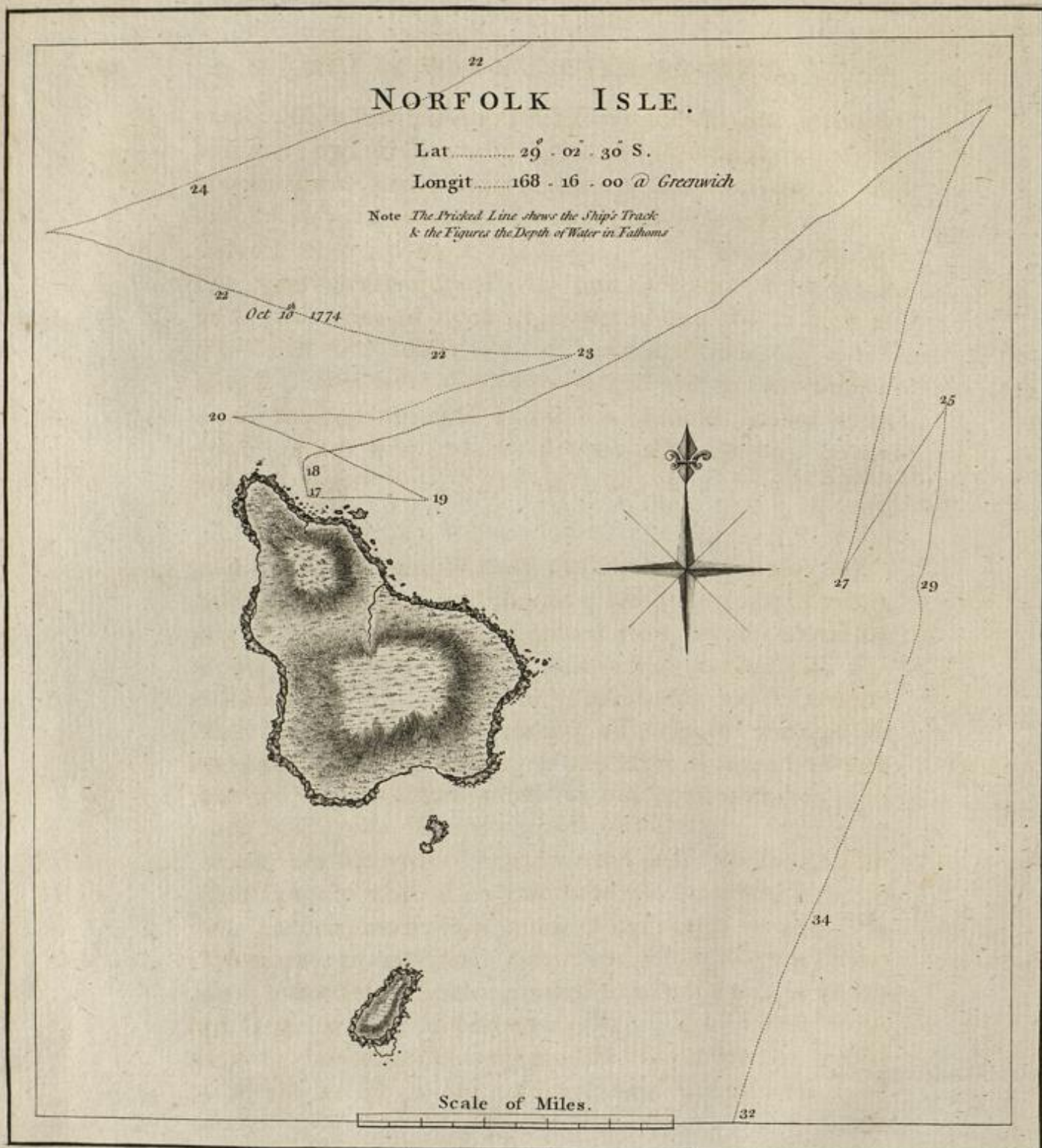


22
NORFOLK ISLE.

Lat $29^{\circ} . 02' . 30''$ S.

Longit $168 . 16 . 00$ @ Greenwich

Note *The Pricked Line shows the Ship's Track
& the Figures the Depth of Water in Fathoms*



Published Feb^o 1^o 1777 by W^m Strahan in New Street, Shoe Lane, & Tho^s Cadell in the Strand London.

N^o VI



evening, Mr. Cooper having struck a porpoise with a harpoon, it was necessary to bring to, and have two boats out, before we could kill it, and get it on board. It was six feet long; a female of that kind, which naturalists call dolphin of the antients, and which differs from the other kind of porpoise in the head and jaw, having them long and pointed. This had eighty-eight teeth in each jaw. The haffet and lean flesh were to us a feast. The latter was a little liverish, but had not the least fishy taste. It was eaten roasted, broiled, and fried, first soaking it in warm water. Indeed, little art was wanting to make any thing fresh, palatable to those who had been living so long on salt meat.

1774.
October.
Saturday 8.

We continued to stretch to W. S. W. till the 10th, when, at day-break, we discovered land, bearing S. W., which on a nearer approach we found to be an island of good height, and five leagues in circuit. I named it Norfolk Isle, in honour of the noble family of Howard. It is situated in the latitude of $29^{\circ} 2' 30''$ S. and longitude $168^{\circ} 16'$ East. The latter was determined by lunar observations made on this, the preceding, and following days; and the former, by a good observation at noon, when we were about three miles from the isle. Soon after we discovered the isle, we founded in twenty-two fathoms on a bank of coral sand; after this we continued to sound, and found not less than twenty-two, or more than twenty-four fathoms (except near the shore), and the same bottom mixed with broken shells. After dinner, a party of us embarked in two boats, and landed on the island, without any difficulty, behind some large rocks which lined part of the coast, on the N. E. side.

Monday 10.

U 2

We



1774.
October.
Monday 10.

We found it uninhabited, and were undoubtedly the first that ever set foot on it. We observed many trees and plants common at New Zealand; and, in particular, the flax plant, which is rather more luxuriant here than in any part of that country; but the chief produce is a sort of spruce pine, which grows in great abundance, and to a large size, many of the trees being as thick, breast high, as two men could fathom, and exceedingly straight and tall. This pine is of a sort between that which grows in New Zealand, and that in New Caledonia; the foliage differing something from both; and the wood not so heavy as the former, nor so light and close-grained as the latter. It is a good deal like the Quebec pine. For about two hundred yards from the shore, the ground is covered so thick with shrubs and plants, as hardly to be penetrated farther inland. The woods were perfectly clear and free from underwood, and the soil seemed rich and deep.

We found the same kind of pigeons, parrots, and parrots as in New Zealand, rails, and some small birds. The sea fowl are, white boobies, gulls, tern, &c. which breed undisturbed on the shores, and in the cliffs of the rocks.

On the isle is fresh water; and cabbage-palm, wood-forrel, sow-thistle, and samphire abounding in some places on the shores, we brought on board as much of each sort as the time we had to gather them would admit. These cabbage-trees or palms, were not thicker than a man's leg, and from ten to twenty feet high. They are of the same genus with the cocoa-nut tree; like it they have large pinnated leaves, and are the same as the second sort found in the northern parts of New South Wales*. The cabbage is, properly

* Vide Hawkesworth's Voyages, Vol. III, Page 624.

speak-



speaking, the bud of the tree; each tree producing but one cabbage, which is at the crown, where the leaves spring out, and is inclosed in the stem. The cutting off the cabbage effectually destroys the tree; so that no more than one can be had from the same stem. The cocoa-nut tree, and some others of the palm kind, produce cabbage as well as these. This vegetable is not only wholesome, but exceedingly palatable, and proved the most agreeable repast we had for some time.

1774.
October.
Monday 10.

The coast does not want fish. While we were on shore, the people in the boats caught some which were excellent, I judged that it was high water at the full and change, about one o'clock; and that the tide rises and falls upon a perpendicular about four or five feet.

The approach of night brought us all on board, when we hoisted in the boats; and stretching to E. N. E. (with the wind at S. E.) till midnight, we tacked, and spent the remainder of the night making short boards.

Next morning at sun-rise, we made sail, stretching to S. S. W., and weathered the island; on the south side of which lie two isles, that serve as roosting and breeding-places for birds. On this, as also on the S. E. side, is a sandy beach; whereas most of the other shores are bounded by rocky cliffs which have twenty and eighteen fathoms water close to them; at least so we found it on the N. E. side, and with good anchorage. A bank of coral sand, mixed with shells, on which we found from nineteen to thirty-five or forty fathoms water, surrounds the isle, and extends, especially to the South, seven leagues off. The morning we discovered the island,
the

Tuesday 11.



1774.
October.
Tuesday 11. the variation was found to be $13^{\circ} 9'$ E. ; but I think this observation gave too much, as others, which we had both before and after, gave 2° less.

After leaving Norfolk Isle, I steered for New Zealand, my intention being to touch at Queen Charlotte's Sound, to refresh my crew, and put the ship in a condition to encounter the southern latitudes.

Monday 17. On the 17th, at day-break, we saw Mount Egmont, which was covered with everlasting snow, bearing S. E. $\frac{1}{2}$ E. Our distance from the shore was about eight leagues, and, on sounding, we found seventy fathoms water, a muddy bottom. The wind soon fixed in the western board, and blew a fresh gale, with which we steered S. S. E., for Queen Charlotte's Sound, with a view of falling in with Cape Stephens. At noon Cape Egmont bore E. N. E., distant three or four leagues; and though the mount was hid in the clouds, we judged it to be in the same direction as the Cape; latitude observed $39^{\circ} 24'$. The wind increased in such a manner as to oblige us to close reef our top-sails, and strike top-gallant yards. At last we could bear no more sail than the two courses, and two close-reefed top-sails; and under them we stretched for Cape Stephens, which we made at eleven o'clock at night.

Tuesday 18. At midnight we tacked and made a trip to the North till three o'clock next morning, when we bore away for the sound. At nine we hauled round Point Jackson through a sea which looked terrible, occasioned by a rapid tide, and a high wind; but as we knew the coast, it did not alarm us. At eleven o'clock we anchored before Ship Cove; the strong flurries from off the land not permitting us to get in.

In

In the afternoon, as we could not move the ship, I went into the Cove, with the seine, to try to catch some fish. The first thing I did after landing, was to look for the bottle I left hid when last here, in which was the memorandum. It was taken away; but by whom it did not appear. Two hauls with the seine producing only four small fish, we, in some measure, made up for this deficiency, by shooting several birds, which the flowers in the garden had drawn thither, as also some old shags, and by robbing the nests of some young ones.

1774.
October.
Tuesday 18.

Being little wind next morning, we weighed and warped the ship into the Cove, and there moored with the two bowers. We unbent the sails to repair them; several having been split, and otherwise damaged in the late gale. The main and fore courses, already worn to the very utmost, were condemned as useless. I ordered the top-masts to be struck and unrigged, in order to fix to them moveable chocks or knees, for want of which the trestle-trees were continually breaking; the forge to be set up, to make bolts and repair our iron-work; and tents to be erected on shore for the reception of a guard, coopers, sail-makers, &c. I likewise gave orders that vegetables (of which there were plenty) should be boiled every morning with oat-meal and portable broth for breakfast, and with peas and broth every day for dinner for the whole crew, over and above their usual allowance of salt meat.

Wednes. 19.

In the afternoon, as Mr. Wales was setting up his observatory, he discovered that several trees, which were standing when we last sailed from this place, had been cut down with saws and axes; and a few days after, the place where an observatory, clock, &c. had been set up, was also found, in a spot
different



1774.
October.
Wednes. 19.

different from that where Mr. Wales had placed his. It was therefore now no longer to be doubted, that the Adventure had been in this Cove after we had left it.

Thursday 20. Next day, winds southerly; hazy cloudy weather. Every body went to work at their respective employments, one of which was to caulk the ship's sides, a thing much wanted. The seams were paid with putty, made with cook's fat and chalk; the gunner happening to have a quantity of the latter on board.

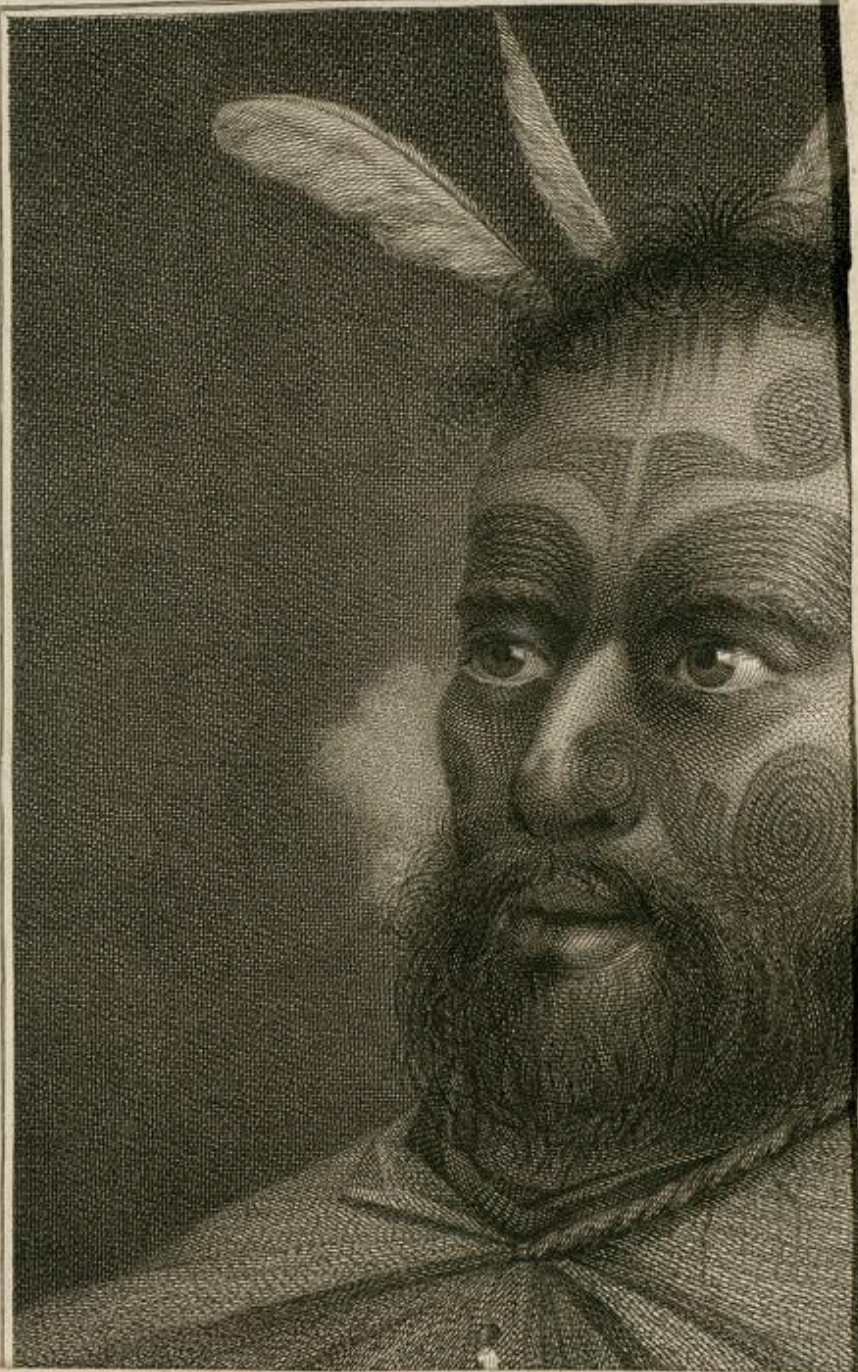
Friday 21. The 21st, wind southerly, with continual rains.

Saturday 22. The weather being fair in the afternoon of the 22d, accompanied by the botanists, I visited our gardens on Motuara, which we found almost in a state of nature, having been wholly neglected by the inhabitants. Nevertheless, many articles were in a flourishing condition, and shewed how well they liked the soil in which they were planted. None of the natives having yet made their appearance, we made a fire on the point of the island; in hopes, if they saw the smoke, they might be induced to come to us.

Monday 24. Nothing remarkable happened till the 24th, when, in the morning, two canoes were seen coming down the sound; but as soon as they perceived the ship, they retired behind a point on the west side. After breakfast I went in a boat to look for them; and as we proceeded along the shore, we shot several birds. The report of the musquets gave notice of our approach, and the natives discovered themselves in Shag Cove by hallooing to us; but as we drew near to their habitations, they all fled to the woods, except two or three men, who stood on a rising ground near the shore, with their arms in their hands. The moment we landed, they knew us.

Joy







Drawn from Nature by W.Hodges .

MAN OF NEW ZEALAND .

Published Feb. 1777, by W. Strahan, New Street, Shoe Lane, and Tho. Cudde, in the Strand, London.

Engraved by Michel.
N^o. LV.



152

1774.
October.

Wednes. 19

Thursday 20

Friday 21

Saturday 22

Monday 23







N^o. LVIII.

Drawn from Nature by W. Hodges.

WOMAN OF NEW ZEALAND.

Published Feb: 1st 1777 by W^m Strahan, in New Street & Tho^s. Cadell in the Strand London.



LANDES-
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Joy then took place of fear; and the rest of the natives hurried out of the woods, and embraced us over and over again, leaping and skipping about like madmen; but I observed that they would not suffer some women, whom we saw at a distance, to come near us. After we had made them presents of hatchets, knives, and what else we had with us, they gave us in return a large quantity of fish, which they had just caught. There were only a few amongst them whose faces we could recognise; and on our asking why they were afraid of us, and inquiring for some of our old acquaintances by name, they talked much about killing, which was so variously understood by us, that we could gather nothing from it; so that, after a short stay, we took leave, and went on board.

1774.
October.
Monday 24.

Next morning early, our friends, according to a promise they had made us the preceding evening, paying us a visit, brought with them a quantity of fine fish, which they exchanged for Otaheitean cloth, &c. and then returned to their habitations.

Tuesday 25.

On the 26th, we got into the after-hold four boat-load of shingle ballast, and struck down six guns, keeping only six on deck. Our good friends the natives having brought us a plentiful supply of fish, afterwards went on shore to the tents, and informed our people there, that a ship like ours had been lately lost in the Strait; that some of the people got on shore; and that the natives stole their cloaths, &c. for which several were shot; that afterwards, when they could fire no longer, the natives having got the better, killed them with their *Patapatoos*, and eat them; but that they themselves had no hand in the affair, which, they said, happened at Vanna Aroa, near Teerawhitte, on the other side of the

Wednes. 26.



1774.
October.
Wednes. 26.

Strait. One man said it was two moons ago; but another contradicted him, and counted on his fingers about twenty or thirty days. They described by actions how the ship was beat to pieces, by going up and down against the rocks, till at last it was all scattered abroad.

Thursday 27.

The next day some others told the same story, or nearly to the same purport, and pointed over the East Bay, which is on the east side of the Sound, as to the place where it happened. These stories making me very uneasy about the Adventure, I desired Mr. Wales, and those on shore, to let me know if any of the natives should mention it again, or to send them to me; for I had not heard any thing from them myself. When Mr. Wales came on board to dinner, he found the very people who had told him the story on shore, and pointed them out to me. I inquired about the affair, and endeavoured to come at the truth by every method I could think of. All I could get from them was, *Caurey* (no); and they not only denied every syllable of what they had said on shore, but seemed wholly ignorant of the matter; so that I began to think our people had misunderstood them, and that the story referred to some of their own people and boats.

Friday 28.

On the 28th, fresh gales westerly, and fair weather. We rigged and fitted the top-masts. Having gone on a shooting-party to West Bay, we went to the place where I left the hogs and fowls; but saw no vestiges of them, nor of any body having been there since. In our return, having visited the natives, we got some fish in exchange for trifles which we gave them. As we were coming away, Mr. Forster thought he heard the squeaking of a pig in the woods, close by their habitations; probably, they may have those I left with them when last here. In the evening, we got on board, with
about



about a dozen and an half of wild-fowl, shags, and sea-pies. The sportsmen who had been out in the woods near the ship, were more successful among the small birds.

1774.
October.
Friday 28.

On the 29th and 30th, nothing remarkable happened, except that in the evening of the latter all the natives left us.

Saturday 29.
Sunday 30.

The 31st being a fine pleasant day, our botanists went over to Long Island, where one of the party saw a large black boar. As it was described to me, I thought it might be one of those which Captain Furneaux left behind, and had been brought over to this isle by those who had it in keeping. Since they did not destroy those hogs when first in their possession, we cannot suppose they will do it now; so that there is little fear but that this country will, in time, be stocked with these animals, both in a wild and domestic state.

Monday 31.

Next day, we were visited by a number of strangers, who came from up the Sound, and brought with them but little fish. Their chief commodity was green stone or talk, an article which never came to a bad market; and some of the largest pieces of it I had ever seen, were got this day.

November.
Tuesday 1.

On the 2d, I went over to the east side of the Sound, and, without meeting any thing remarkable, returned on board in the evening, when I learnt that the same people who visited us the preceding day, had been on board most of this, with their usual article of trade.

Wednes. 2.

On the 3d, Mr. Pickersgill met with some of the natives, who related to him the story of a ship being lost, and the people being killed; but added, with great earnestness, it was not done by them.

Thursday 3.



1774.
November.
Friday 4.

On the 4th, fine pleasant weather. Most of the natives now retired up the Sound. Indeed, I had taken every gentle method to oblige them to be gone; for since these new-comers had been with us, our old friends had disappeared, and we had been without fish. Having gone over to Long Island, to look for the hog which had been seen there, I found it to be one of the sows left by Captain Furneaux; the same that was in the possession of the natives when we were last here. From a supposition of its being a boar, I had carried over a sow to leave with him; but on seeing my mistake, brought her back, as the leaving her there would answer no end.

Saturday 5.

Early in the morning of the 5th, our old friends made us a visit, and brought a seasonable supply of fish. At the same time I embarked in the pinnace, with Messrs. Forsters and Spearman, in order to proceed up the Sound. I was desirous of finding the termination of it; or rather of seeing if I could find any passage out to sea by the S. E., as I suspected from some discoveries I had made when first here. In our way up, we met with some fishers, of whom we made the necessary inquiry; and they all agreed that there was no passage to sea by the head of the Sound. As we proceeded, we, some time after, met a canoe conducted by four men coming down the Sound. These confirmed what the others had said, in regard to there being no passage to sea the way we were going; but gave us to understand that there was one to the East, in the very place where I expected to find it. I now laid aside the scheme of going to the head of the Sound, and proceeded to this arm, which is on the S. E. side, about four or five leagues above the Isle of Motuara.

A little within the entrance on the S. E. side, at a place called Kotieghenooee, we found a large settlement of the natives.



tives. The chief, whose name was Tringo-boohee, and his people, whom we found to be some of those who had lately been on board the ship, received us with great courtesy. They seemed to be pretty numerous both here and in the neighbourhood. Our stay with them was short, as the information they gave us encouraged us to pursue the object we had in view. Accordingly we proceeded down the arm E. N. E. and E. by N., leaving several fine coves on both sides, and at last found it to open into the Strait by a channel about a mile wide, in which ran out a strong tide; having also observed one setting down the arm, all the time we had been in it. It was now about four o'clock in the afternoon; and in less than an hour after, this tide ceased, and was succeeded by the flood, which came in with equal strength.

The outlet lies S. E. by E. and N. W. by W.; and nearly in the direction of E. S. E. and W. N. W. from Cape Terra-
 whitte. We found thirteen fathoms water a little within the entrance, clear ground. It seemed to me that a leading wind was necessary to go in and out of this passage, on account of the rapidity of the tides. I, however, had but little time to make observations of this nature, as night was at hand, and I had resolved to return on board. On that account, I omitted visiting a large *Hippa*, or strong-hold, built on an elevation on the north side, and about a mile or two within the entrance. The inhabitants of it, by signs, invited us to go to them; but, without paying any regard to them, we proceeded directly for the ship, which we reached by ten o'clock, bringing with us some fish we had got from the natives, and a few birds we had shot. Amongst the latter were some of the same kind of ducks we found in Dusky Bay; and we have reason to believe that they are all to be met with
 here.

1774.
 November.
 Saturday 5.



1774.
November.

here. For the natives knew them all by the drawings, and had a particular name for each.

Sunday 6.

On the 6th, wind at N. E., gloomy weather with rain. Our old friends having taken up their abode near us, one of them, whose name was Pedero (a man of some note), made me a present of a staff of honour, such as the chiefs generally carry. In return, I dressed him in a suit of old clothes, of which he was not a little proud. He had a fine person, and a good presence, and nothing but his colour distinguished him from an European. Having got him, and another, into a communicative mood, we began to inquire of them if the Adventure had been there during my absence; and they gave us to understand, in a manner which admitted of no doubt, that, soon after we were gone, she arrived, that she staid between ten and twenty days, and had been gone ten months. They likewise asserted that neither she, nor any other ship, had been stranded on the coast, as had been reported. This assertion, and the manner in which they related the coming and going of the Adventure, made me easy about her; but did not wholly set aside our suspicions of a disaster having happened to some other strangers. Besides what has been already related, we had been told that a ship had lately been here, and was gone to a place called Terato, which is on the north side of the Strait. Whether this story related to the former or no, I cannot say. Whenever I questioned the natives about it, they always denied all knowledge of it; and for some time past, had avoided mentioning it. It was but a few days before, that one man received a box on the ear for naming it to some of our people.

After breakfast, I took a number of hands over to Long-Island, in order to catch the sow, to put her to the boar, and
remove



remove her to some other place; but we returned without seeing her. Some of the natives had been there not long before us, as their fires were yet burning; and they had undoubtedly taken her away. Pederø dined with us, eat of every thing at table, and drank more wine than any one of us, without being in the least affected by it.

1774.
November.
Sunday 6.

The 7th, fresh gales at N. E., with continual rain.

Monday 7.

The 8th, fore-part rain, remainder fair weather. We put two pigs, a boar and a sow, on shore, in the cove next without Cannibal Cove; so that it is hardly possible all the methods I have taken to stock this country with these animals should fail. We had also reason to believe that some of the cocks and hens which I left here still existed, although we had not seen any of them; for an hen's egg was, some days before, found in the woods almost new laid.

Tuesday 8.

On the 9th, wind westerly or N. W., squally, with rain. In the morning we unmoored, and shifted our birth farther out of the cove, for the more ready getting to sea the next morning; for, at present, the caulkers had not finished the sides, and till this work was done we could not sail. Our friends having brought us a very large and seasonable supply of fish, I bestowed on Pederø a present of an empty oil-jar, which made him as happy as a prince. Soon after, he and his party left the cove, and retired to their proper place of abode, with all the treasure they had received from us. I believe that they gave away many of the things they, at different times, got from us, to their friends, and neighbours, or else parted with them to purchase peace of their more powerful enemies; for we never saw any of our presents after they were once in their possession; and every time we visited them they were as much in want of hatchets, nails,

Wednes. 9.

&c.



1774.
November.
Wednesd. 9.

&c. to all appearance, as if they never had had any among them.

I am satisfied that the people in this Sound, who are, upon the whole, pretty numerous, are under no regular form of government, or so united as to form one body politic. The head of each tribe, or family, seems to be respected; and that respect may, on some occasions, command obedience; but I doubt if any amongst them have either a right or power to enforce it. The day we were with Tringo-boohee, the people came from all parts to see us, which he endeavoured to prevent. But though he went so far as to throw stones at some, I observed that very few paid any regard either to his words or actions; and yet this man was spoken of as a chief of some note. I have, before, made some remarks on the evils attending these people for want of union among themselves; and the more I was acquainted with them, the more I found it to be so. Notwithstanding they are cannibals, they are naturally of a good disposition, and have not a little humanity.

In the afternoon a party of us went ashore into one of the coves, where were two families of the natives variously employed; some sleeping, some making mats, others roasting fish and fir roots, and one girl, I observed, was heating of stones. Curious to know what they were for, I remained near her. As soon as the stones were made hot, she took them out of the fire, and gave them to an old woman, who was sitting in the hut. She placed them in a heap, laid over them a handful of green cellery, and over that a coarse mat, and then squatted herself down, on her heels, on the top of all; thus making a kind of Dutch warming-pan, on which she sat as close as a hare on her seat. I should hardly have mentioned

mentioned this operation, if I had thought it had no other view than to warm the old woman's backside. I rather suppose it was intended to cure some disorder she might have on her, which the steams arising from the green cellery might be a specific for. I was led to think so by there being hardly any cellery in the place, we having gathered it long before; and grafs, of which there was great plenty, would have kept the stoves from burning the mat full as well, if that had been all that was meant. Besides, the woman looked to me sickly, and not in a good state of health.

1774.
November.
Wednes. 9.

Mr. Wales, from time to time communicated to me the observations he had made in this Sound for determining the longitude, the mean results of which give $174^{\circ} 25' 7'' \frac{1}{2}$ East, for the bottom of Ship Cove, where the observations were made; and the latitude of it is $41^{\circ} 5' 56'' \frac{1}{2}$ South. In my chart, constituted in my former voyage, this place is laid down in $184^{\circ} 54' 30''$ West, equal to $175^{\circ} 5' 30''$ East. The error of the chart is therefore, $0^{\circ} 40' 0''$, and nearly equal to what was found at Dusky Bay; by which it appears that the whole of Tavai-poennammoo, is laid down $40'$ too far East in the said chart, as well as in the journal of the voyage. But the error in Eahei-no-mauwe, is not more than half a degree, or thirty minutes; because the distance between Queen Charlotte's Sound and Cape Palliser has been found to be greater by $10'$ of longitude than it is laid down in the chart. I mention these errors, not from a fear that they will affect either navigation or geography, but because I have no doubt of their existence; for, from the multitude of observations which Mr. Wales took, the situation of few parts of the world is better ascertained than Queen Charlotte's Sound. Indeed, I might, with equal truth, say the



1774.
November.
Wednes. 9.

same of all the other places where we made any stay; for Mr. Wales, whose abilities are equal to his assiduity, lost no one observation that could possibly be obtained. Even the situation of those islands which we passed without touching at them, is, by means of Kendal's watch, determined with almost equal accuracy. The error of the watch from Otaheite to this place was only $43' 39'' \frac{1}{4}$ in longitude, reckoning at the rate it was found to go at, at that island and at Tanna; but by reckoning at the rate it was going when last at Queen Charlotte's Sound, and from the time of our leaving it, to our return to it again, which was near a year, the error was $19' 31'' 25$ in time, or $4^{\circ} 52' 48'' \frac{1}{4}$ in longitude. This error cannot be thought great, if we consider the length of time, and that we had gone over a space equal to upwards of three-fourths of the equatorial circumference of the earth, and through all the climates and latitudes from 9° to 71° . Mr. Wales found its rate of going here to be that of gaining $12'' 576$, on mean time, per day.

The mean result of all the observations he made for ascertaining the variation of the compass and the dip of the south end of the needle, the three several times we had been here, gave $14^{\circ} 9' \frac{1}{3}$ East for the former; and $64^{\circ} 36'' \frac{2}{3}$ for the latter. He also found, from very accurate observations, that the time of high-water preceded the moon's southing, on the full and change days, by three hours; and that the greatest rise and fall of the water was five feet ten inches and an half; but there were evident tokens on the beach, of its having risen two feet higher than it ever did in the course of his experiments.

A V O Y-

