

# WILEY



---

The New Hebrides and Santa Cruz Groups

Author(s): A. H. Markham

Source: *Journal of the Royal Geographical Society of London*, Vol. 42 (1872), pp. 213-243

Published by: [Wiley](#) on behalf of [The Royal Geographical Society \(with the Institute of British Geographers\)](#)

Stable URL: <http://www.jstor.org/stable/1798597>

Accessed: 10/06/2014 18:17

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Wiley and *The Royal Geographical Society (with the Institute of British Geographers)* are collaborating with JSTOR to digitize, preserve and extend access to *Journal of the Royal Geographical Society of London*.

<http://www.jstor.org>

VIII.—*The New Hebrides and Santa Cruz Groups.* By Lieut. A. H. MARKHAM, R.N.

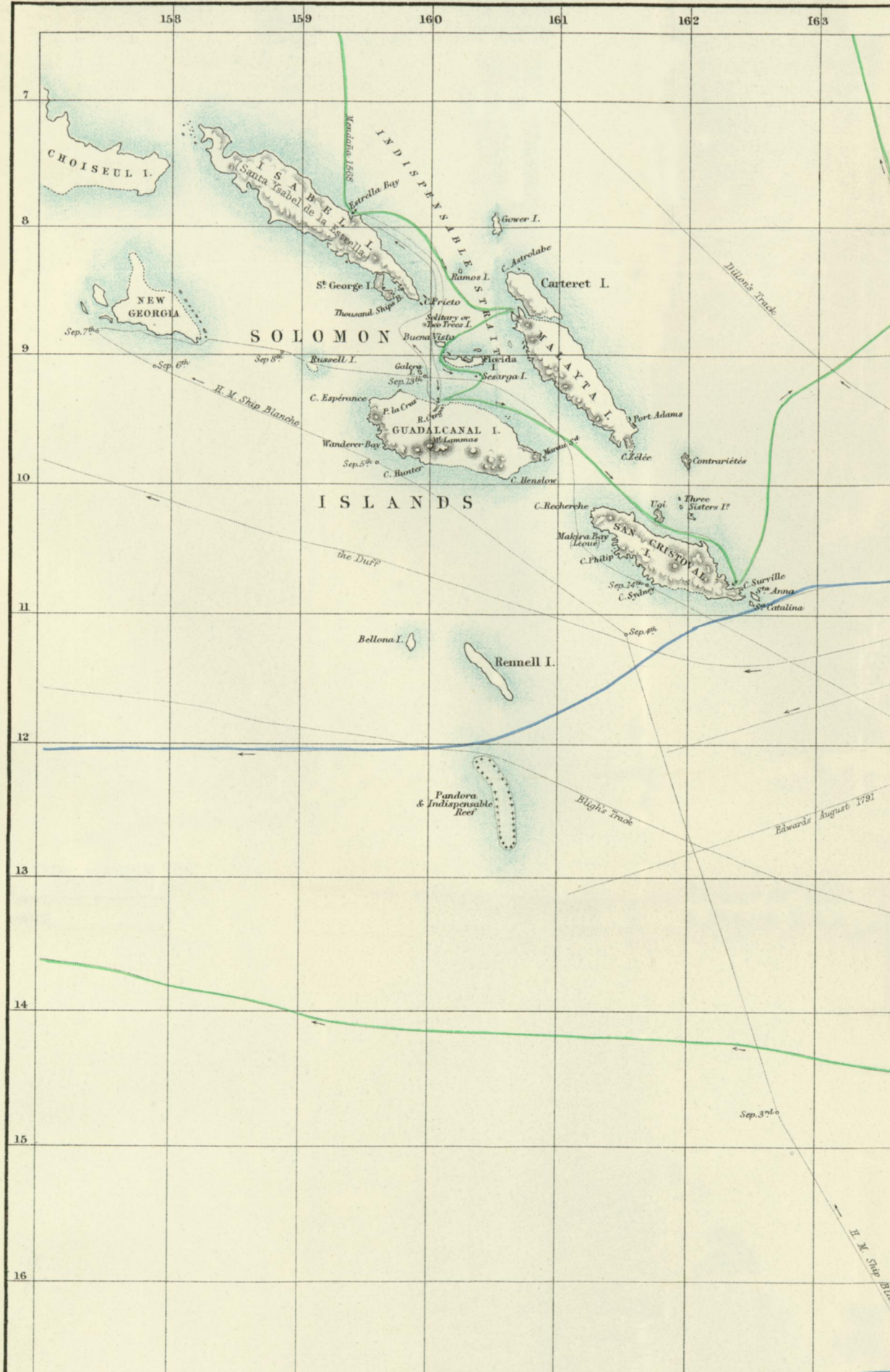
[Read, June 10, 1872.]

DURING a cruise on board H.M.S. *Rosario*, under my command from October 1871 to February 1872, it was my duty to visit nearly every island in the New Hebrides and Santa Cruz groups; and, as no paper on these little-known islands has yet been published in the Journals of the Royal Geographical Society, some account of them, and of their inhabitants, may be acceptable. It will be well, however, to preface my personal observations with a brief enumeration of previous voyages, by which a clear idea will be presented of the extent to which these groups have hitherto been explored, since the time of their discovery. Such a *résumé* naturally commences with the voyages undertaken by the Spaniards at the period when they were at the height of their power, and when the spirit of enterprise and adventure was fully developed among them.

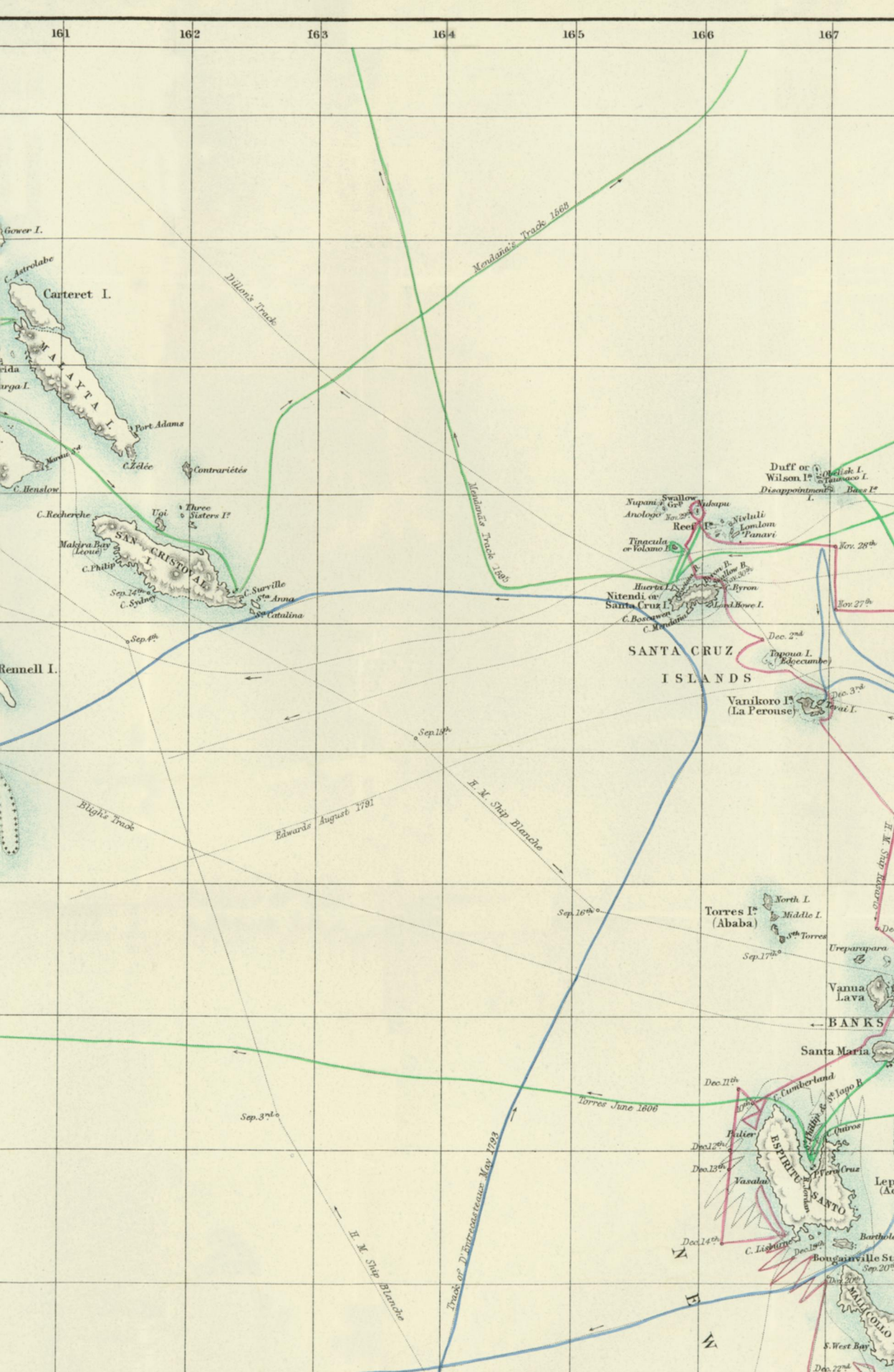
The imperial ideas of the Spanish viceroys of Peru led to the discovery of the Solomon and Hebrides groups; for those ambitious statesmen were not satisfied with the great western provinces acquired by Spain, and aspired to the renown of adding a southern empire to the vast realms of the Catholic King. With his mind bent upon this achievement, that calm and laborious administrator, Lope de Castro, found time, amidst the cares and anxieties of Peruvian legislation, to fit out an expedition at Callao, under the command of his young nephew Alvaro de Mendaña, then only 27 years of age, and to despatch it with orders to discover the supposed southern land. In three days Mendaña, accompanied by Hernan de Gallego, an accomplished navigator, as chief pilot, (and the expedition) sailed from Callao on the 10th of January, 1568, and discovered the Solomon Islands. After a long voyage across the Pacific, they anchored off an unknown land, to which Mendaña gave the name of *Santa Ysabel de la Estrella*. Here they established their head-quarters, and the Spaniards had convincing evidence of the cannibalism of the natives, by being presented with an arm and shoulder of a boy, which Mendaña caused to be solemnly interred in presence of the savages that had brought it; who, says the historian of the voyage, went away with their heads down.\* The natives were engaged in wars amongst themselves, and they made several attacks upon the Spaniards, which led to loss of life on both sides. Mendaña caused a small vessel to be built, drawing little

---

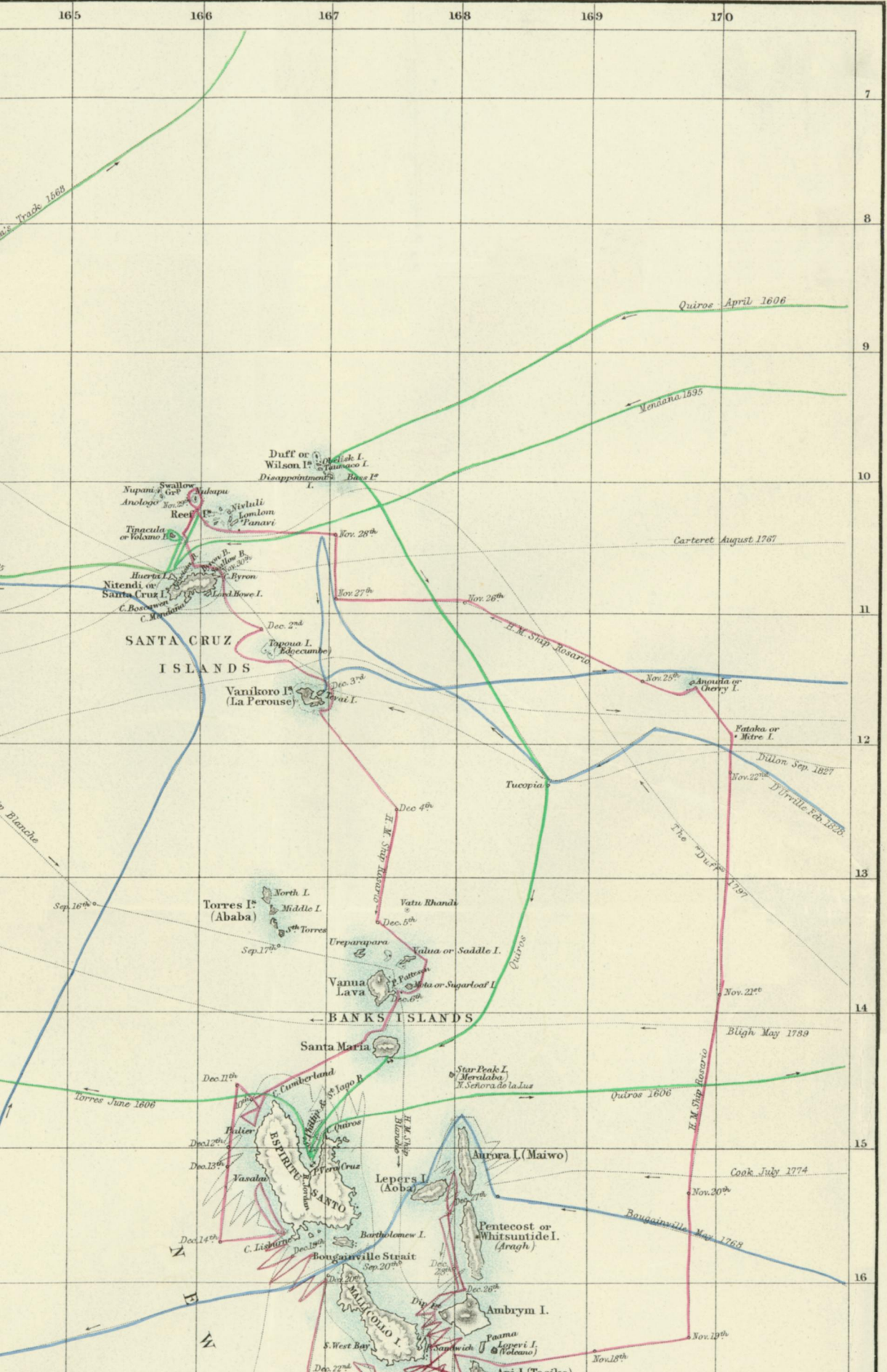
\* “Se fueron baxadas las cabeças.”











The  
SOLOMON, NEW HEBRIDES,  
AND SANTA CRUZ GROUPS.  
(SOUTH PACIFIC OCEAN)

to Illustrate the Paper  
by  
Lieut. A.H. Markham R.N.

English Voyages ..... *H.M.S. Rosario*  
French Do. .... *Red.*  
Spanish Do. ....

Sep. 3<sup>rd</sup> 1878

H.M. Ship Blanche

Bougainville 1768

Huan I.  
D'Entrecasteaux  
Reefs

French  
Reefs

Belep I.

Yan

Pouan

158

159

160

161

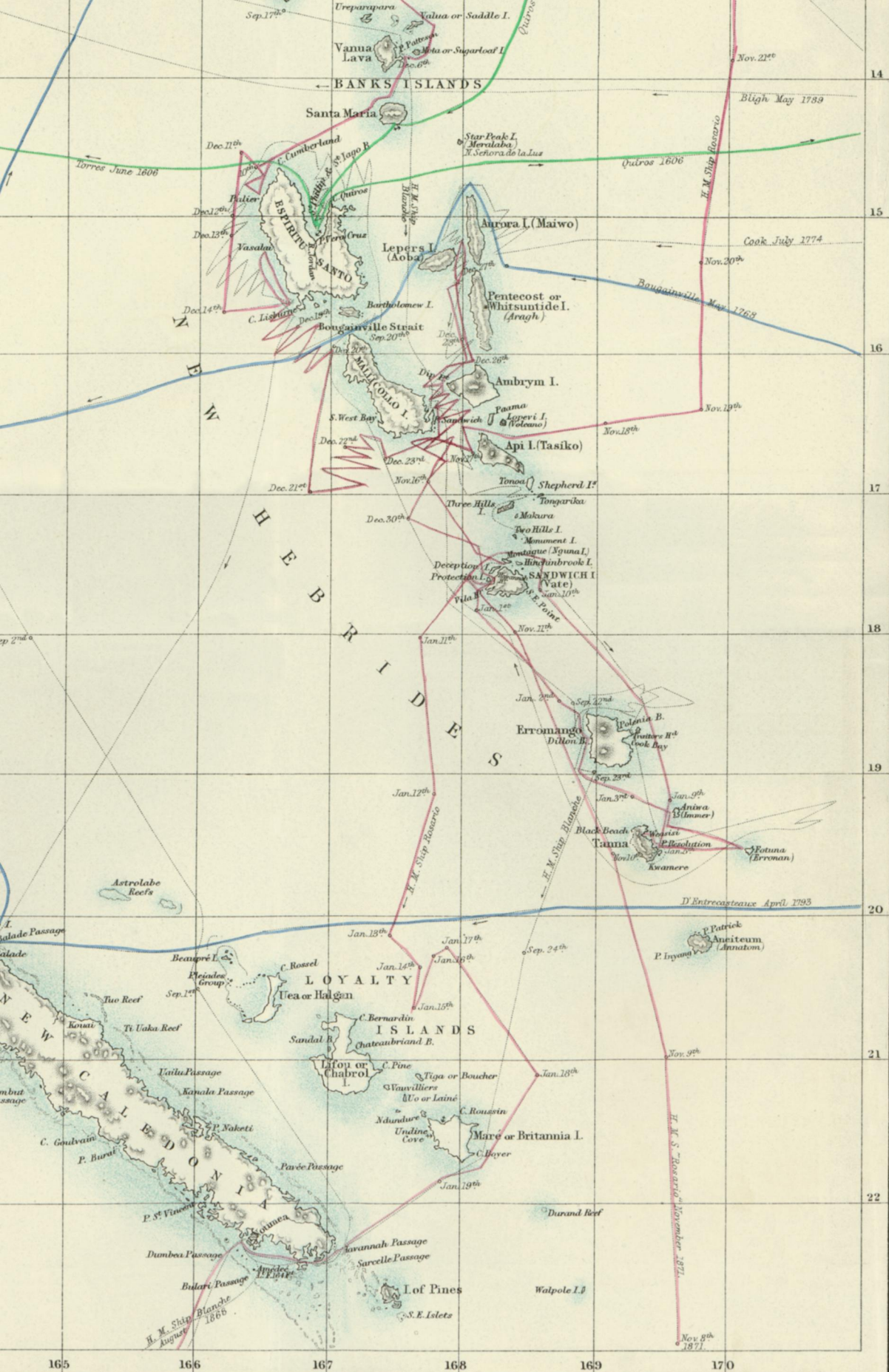
162

163











water and suitable for the navigation of intricate channels, in which the pilot Gallego was despatched to explore the group of islands. This experienced navigator made a more complete survey than has ever been attempted since his time. Besides the four great islands of *Ysabel*, *Malayta*, *Guadalcanal*, and *San Cristoval*, he discovered a vast number of smaller islets and gave the names to ten of them, which they still retain :—

<i>Ramos.</i>	<i>Guadaloupe.</i>
<i>Buena Vista.</i>	<i>Sesarga.</i>
<i>Florida.</i>	<i>San Jorge.</i>
<i>San Durias.</i>	<i>Santa Catalina.</i>
<i>San German.</i>	<i>Santa Ana.</i>

Mendaña also named the southern extremity of Ysabel Island, *Cape Prieto*, an anchorage in Guadalcanal *Port La Cruz* and two rivers in the same island, *Gallego* and *Ortega*. The latter places have never since been visited, and the north-eastern side of the large island of Guadalcanal is still entirely unknown. The return voyage was disastrous, strong head-winds delayed them many days until the daily rations were reduced to 8 ounces of pounded biscuit and one cup of foul water for each man, and both vessels lost their main masts. But at length they reached the coast of Mexico, in January, 1569. The only published account of this important expedition consists of a few pages in the biography of the Marquis of Cañete by Figueroa ;\* but the journal of the pilot Gallego has been preserved, though it is still in manuscript.†

A quarter of a century was allowed to elapse before the attempt was renewed. Mendaña had called his discoveries the *Salomon Islands*, with a view to enhancing their importance by inducing the belief that they were the lands whence the riches of the temple were brought ; and the question of their colonization was never lost sight of. In 1590 the gallant Don Garcia Hurtado de Mendoza, Marquis of Cañete, became viceroy of Peru ; and in 1595 he resolved to attempt the settlement of the Solomon Islands. The command of the expedition was again intrusted to Mendaña, and the Marquis declared that, although the enterprises of Drake, Cavendish and Hawkins rivalled the achievement of Magellan, yet that in Mendaña Spain had a commander not less famous and distinguished than any of the great navigators who had gone before him. The Santa Cruz group was discovered in Mendaña's second expedition, which sailed from here in 1595 ; and the islands of the different groups

\* 'Hechos de Don Garcia Hurtado de Mendoza, 4º Marqués de Cañete, por Dr. Don Christoval Suarez de Figueroa' (Madrid, 1613), lib. v.

† 'Viage á las Yslas de Salomon por Gallego,' *Additional MSS.* 17,623, *British Museum*.

have since been visited by Carteret, Bougainville, Cook, and other well-known navigators. The second expedition of Mendaña was composed of four vessels. On board the *capitana* named *San Geronimo*, was the Adelantado Mendaña himself, his wife the Lady Isabel, his brother-in-law Don Lorenzo Barreto, the master of the camp Manorque, and the chief pilot Don Pedro Fernandez de Quiros. The pilot is described as "a man of known worth, experienced in the dangers of the sea, and learned in many things of the heavens having to do with navigation." (He is said to have been a native of Evora in Portugal, but he had been long in the Spanish service. The second ship was the *almiranta* named *Santa Ysabel*, under the command of Lope de Vega, and there were also a *fragata* and a *galeota*, named respectively the *San Felipe* and the *Santa Catalina*.) With a view to colonization, a number of married men were enlisted on the Peruvian coast valleys of Truxillo and Saña, who were embarked with their wives, at the port of Cherrepe; the whole force numbering 368 men, of whom 200 were arquebusiers. The expedition finally sailed from Payta on the 16th of June, 1595, and, after discovering the Marquesas, land was sighted from the *capitana* on the 7th of September. The *almiranta* was nowhere to be seen, but the *fragata* and *galeota* were in company; and right ahead a lofty sugar-loaf rose out of the sea, with cinders and flames issuing from its summit. At intervals there was a loud rumbling noise, followed by dense volumes of smoke. Mendaña sailed round the volcano in search of the *almiranta*, but she was never heard of again. No tree or green thing was to be seen on the *Volcano Island*, but land was in sight to the south, and as the three Spanish vessels approached it, they were surrounded by natives in canoes. The natives are described as of a black colour with frizzled hair, often dyed red or yellow, quite naked, with their skins painted in stripes darker than its natural colour. On their persons they wore large and small plates of shell. They were armed with bows and arrows, some of the latter being pointed with bone and anointed with some poison, which the Spaniards, however, did not believe to be very deadly.\* They also had spears and heavy wooden clubs. They discharged volleys of arrows at the ships, and the soldiers were ordered to fire in return, when one native was killed and many were wounded.

Mendaña at first believed that he had reached the Solomon Islands. He called the land *Santa Cruz* and anchored his vessels in a bay at the north-west end, to which he gave the name of *Graciosa*. A small green island near the entrance was

---

\* "Aunque de poco daño."



named *La Huerta*, or the garden. Here the Spaniards determined to form a colony; and Mendaña secured the friendship of an old chief, named Malope. But every village formed a separate and hostile community, and the friendship of one by no means secured even neutrality from others. The Spanish watering-parties were attacked, and the Master of the Camp landed, with 30 arquebusiers, to take vengeance by fire and sword. He killed five natives, cut down the coco-nut trees, and burnt the villages and canoes. Mendaña then selected a site for a town, and his people began to fell trees and build houses. He describes the animal and vegetable products of the island, the various kinds of roots used for food, and the practice of chewing betel. The native huts are described as round, and resting on a central pole, the whole being roofed with palm-trees. They are surrounded by a stone breastwork, and in each village there is a large house or temple, containing rudely carved wooden figures in half relief. The *fragata* sailed round the island of Santa Cruz, and visited the *Reef Islands*, where eight native boys were kidnapped.

But the expedition of Mendaña was fated to end in failure. The beginning of the disasters was the murder of the chief Malope by some Spanish soldiers. The murderers were punished with death, but this did not satisfy the islanders, who ever afterwards showed the most resolutely hostile feeling. The change of climate and diet, working in the sun, wet clothes, and sleeping on the ground, brought on diseases, and many Spaniards died in their huts on shore. The natives ceased to bring in any supplies; and at last a mutinous feeling appeared among the troops, which was not quelled until the Master of the Camp, with two others, had been executed for insubordination. To crown these misfortunes, the Adelantado Mendaña himself was taken ill and died. He had powers from the king to appoint his successors, and he named his wife Doña Isabel, as General of the fleet, and her brother Don Lorenzo as second in command. On the 17th of October the gallant explorer was buried with all possible splendour, the body being wrapped in a shroud, covered with black cloth, and borne to the grave by eight of the chief officers, followed by soldiers with their arms reversed, to the sound of muffled drums. Soon afterwards there was another encounter with the natives, in which Don Lorenzo was wounded with an arrow. He died on the 2nd of November, and was buried with the same honours as Mendaña.

The Governess Doña Isabel now resolved to abandon this ill-fated settlement, and renew the attempt to find the Solomon Isles. She embarked with the sick; but the banner remained on shore for a few days longer, while the few healthy soldiers

procured wood and water. At last all were embarked on the 7th of November, and, after obtaining a supply of provisions by force from the island of *La Huerta*, the expedition bade farewell to the isle of Santa Cruz. The body of the Adelantado Mendaña was disinterred and put on board the *fragata*, for conveyance to Manilla. The brave Governess, aided by Quiros, at first intended to complete her husband's work by sailing to the Solomon group, but the increasing sickness of the people obliged her to bear up for the Philippines, in order to bring priests and colonists and to obtain supplies. Disease raged on board the ships, and we are told of the good deeds of a hermit, named Juan Leal, who was an old soldier in the Chilian campaigns. He tended the sick, made their beds, gave them medicine, and consoled them when dying, ever with a kind smile and cheerful face. Many died every day. The deaths increased, but at length the *capitana* arrived at Manilla on the 11th of February, 1596, where the sick were kindly treated and the Peruvian widows found new husbands. The *galeota* also arrived safely, but the *fragata*, with the body of Mendaña on board, was lost. She was reported to have been seen to ground on a reef with all sail set, and all on board dead. The pilot Quiros escorted his fair Governess to Mexico, whence he proceeded to Spain, and ceased not to send in memorials, urging the advantages of another attempt to discover the southern continent.

The published account of Mendaña's second expedition, is in the 6th book of the life of the Marquis of Cañete, by Suarez de Figueroa, which is avowedly taken from the papers of the pilot Quiros. Some further particulars will be found in a letter from Quiros to Antonio de Morga.\*

The untiring perseverance of the pilot Quiros, in urging the Spanish Government to despatch another exploring expedition in search of his great southern continent was at last rewarded, and he was himself ordered to proceed to Lima and fit out two ships, to be provided by the Viceroy of Peru. After some months the equipment was completed, one vessel being commanded by Quiros himself, and the other by Luis Vaez de Torres. They sailed from Callao on the 21st of December, 1605, amidst the acclamations of a vast concourse of people, the firing of salutes, and the fluttering of hundreds of gorgeous banners. Six monks of the order of St. Francis accompanied the expedition, and they christened the Pacific Ocean by the name of "the gulf of our Lady of Loreto." After touching at several islands, one of which is generally supposed to have been Tahiti,

\* 'Sucesos de las Islas Philipinas, por el Dr. Antonio de Morga' (Mexico, 1609). Translated and edited for the Hakluyt Society, by Lord Stanley of Alderley, pp. 65-74.



they sighted land on the 7th of April, 1606. At a distance it appeared to be only one island, but on approaching nearer, it turned out to consist of several small islands with reefs; and an anchorage was found near them, there being a larger island at a short distance. One small island rose like a castle out of the reef, with many huts upon it, where the islanders took refuge when they were attacked by enemies. The natives were friendly and supplies were easily obtained. Quiros requited their hospitality by seizing four men, to act as interpreters; but he had already obtained much information from the chief, named Tamay, respecting the size and position of neighbouring islands. He found that that on which they had landed was called *Taumaco*, and that there was a much larger island to the southward, called *Manicolo*. Three of the kidnapped natives jumped overboard and escaped, the fourth appears to have been a prisoner at Taumaco, and he was taken to Mexico where he died. He stated that he was a native of an island called *Chicayana*, four days' sail in a canoe from Taumaco, where the natives had long loose hair; that three days' sail from Taumaco, and two from Chicayana, there was another island, called *Guaytopo*, and that from an island to the south called *Tucopia*, it was five days' sail to Manicolo.

Sailing from Taumaco, they saw land towards the south-east on the 21st of April, and passed close to the island of Tucopia; and on the 25th they named a lofty islet, *Nuestra Señora de la Luz*. On that afternoon they were in sight of land in all directions, and touched at an island which was named *La Virgen Maria*. The natives invited the Spaniards to approach by waving branches of palm, and as soon as the boats were within range, poured in a deadly volley of poisoned arrows.\* The Spaniards replied by a discharge of musketry, killing and wounding several of the islanders. The ships then stood for the extensive land in sight to the south-west and entered a large bay on the 30th of April, which was named, "*San Felipe y Santiago*." The ship anchored in a good port at the head of the bay on May 3rd, which was called *Vera Cruz*, and two rivers which flowed into it received the names of *Jordan* and *Salvador*. Quiros gave a most inviting account of the surrounding country, and, believing that he had at length discovered his southern continent, he named it *Australia del Espíritu Santo*. On landing, a native chief drew a line on the beach and made signs that no Spaniard must pass it; but Torres, thinking that compliance would appear cowardly, crossed the line. The islanders then discharged a flight of arrows, and the Spaniards fired upon them,

---

\* "Flechas armadas con yerva."

killing the chief and several others. The rest fled, and so all chance of a friendly understanding was destroyed. Several long expeditions were afterwards made into the interior, in search of provisions, when there were more encounters with the natives; and the prospects of the city of *New Jerusalem*, the foundation of which was decreed by Quiros, were far from being promising. The misfortunes of the expedition were increased by an accident arising from the ship's companies having eaten some poisonous fish, called *pargos*; owing to which they were all attacked with a violent disorder that disabled them for some days. The remedies of the surgeon (Andrada) were bleeding and cupping night and day. At last the expedition sailed on the 5th of June, but encountered a heavy gale of wind outside the bay. Torres put back and anchored again; but there appears to have been a mutiny on board the ship commanded by Quiros, and he was forced to make sail and return to Spanish America, with a heavy heart at his ill-success, reaching Acapulco in October. Torres sailed round the north end of *Espíritu Santo*, and afterwards discovered the strait which bears his name. Quiros proceeded to the Court of Spain, and at once began to send in memorials, beseeching the king to give him the command of another expedition, and representing the advantages of settling the vast lands of Australia. At length his prayers were favourably received, but he died at Panamá, on his way out to equip vessels at Callao.

The fullest published account of the voyage of Quiros will be found in Torquemada's '*Monarquía Indiana*,'\* an abridged translation of which was published by Dalrymple;† but further interesting particulars will be found in two '*Memorials*' by Quiros himself,‡ in the '*Memorials*' of Juan Luis Arias,§ and of Torres,|| in a letter from Diego de Prado,¶ who was in the expedition, but an enemy of Quiros, and in the accounts of the purser Juan de Iturbe, and of the pilot Gaspar Gonzales de Lerza, which are still in manuscript, in the National Library at Madrid.\*\*

More than a century and a half elapsed before another exploring expedition visited these islands, though Le Maire and Schouten in 1616, and Roggewein in 1722, must have passed very

\* Lib. V. cap. lxiv. p. 738.

† '*An Historical Collection of Voyages and Discoveries in the South Pacific Ocean.*' By Alexander Dalrymple (London, 1770), i. p. 95.

‡ Translated by Dalrymple.

§ Translated in Major's '*Early Indications of Australia.*'

|| Given in Major's '*Early Indications of Australia*' and in Lord Stanley's '*Philippine Islands*' (Hakluyt Society).

¶ Also in Lord Stanley's '*Philippine Islands*,' p. 412.

\*\* J. M.



near them. The chances of the Spaniards passed away with their famous navigator, and the death of Quiros at Panamá perhaps changed the history of the great southern continent of Australia.

At last, in 1767, Captain Philip Carteret \* approached the islands on almost the same track as that of Mendaña's second expedition. But, though sent to explore unknown lands, Carteret was very badly supplied. He was in an old sloop called the *Swallow*, scarcely seaworthy when she sailed, and now in a leaky condition; and half the men were down with scurvy. On the 12th of August the *Swallow* anchored in a bay at the eastern end of the northern side of Santa Cruz Island, and the master was sent away in the cutter with orders to examine the land to the westward. The party was attacked by the natives when they went on shore, and several men were severely wounded. The master returned with three arrows in his body, and he and three of the men died of their wounds. A lieutenant went on shore in the long boat for water, and was also attacked; so Captain Carteret brought the *Swallow's* broadside to bear on the watering-place, and when arrows were discharged at the landing-party, he opened fire from the ship, and very soon cleared the bush, 200 natives rushing out and running away. The watering was then completed without further molestation. Captain Carteret was confined to bed by an inflammatory attack, the master was dying, the lieutenant, and gunner, and 30 men were incapable of duty, and among the latter three were mortally and seven severely wounded with poisoned arrows.

On the 17th the *Swallow* stood along the coast, and Carteret gave the name of *Egmont* to Santa Cruz Island. The north-east point of the island was called *Cape Byron*, the first anchorage *Swallow Bay*, a small harbour to the westward, just big enough to receive three ships, *Byron's Harbour*, and the bay where the cutter was attacked by the natives *Bloody Bay*. He also named the Huerta of Mendaña *Trevanion's Island*. Crowds of natives came off in canoes and attacked one of the boats, when grape-shot was fired from the ship. Carteret then made sail for Dampier's New Britannia. Captain Carteret was unduly prolific in the names he gave right and left, often to places already named by Mendaña. He called the whole Santa Cruz group *Queen Charlotte's Islands*. As he approached the main island of the group the land appeared to form two distinct islands, and to the southernmost he gave the name of *Lord Howe's Island*. He mentions the volcano of Mendaña as an island of stupendous height and conical shape, "the top of it shaped

---

\* 'Voyage of Captain Philip Carteret in the sloop *Swallow*,' 1766-69.

like a funnel, from which we saw smoke issue, but no flame," he also called it *Volcano Island*. As he approached Santa Cruz he sighted the reef islands of Mendaña to the north-west, and called them *Keppell's* or *Swallow Islands*, and land to the south-west, which he named (Outry) and *Lord Edgecomb Islands*. His longitudes are 75 miles too far to the east.

Carteret was followed, in 1768, by the French expedition of M. de Bougainville,\* in two ships named the *Boudeuse* and *Etoile*; which passed to the southward of any of the land previously visited in these groups. On the 4th of May, the French ships came in sight of a beautiful island covered with trees, and of another to the southward, to which Bougainville gave the names of *Ile de Pentecôte* and *Ile Aurore* respectively. He tried to pass between them, but the wind was foul, so he doubled the northern end of Aurora, and, in doing so, sighted a small but lofty island to which he gave the name of *Pic de l'Etoile*; but it is the *Nuestra Señora de la Luz* of Quiros. Bougainville then determined to land, for wood and water, on an island to the westward of Aurora, but with threatening gestures the natives made signs to the French to keep off, and retreated into the bush. After cutting down some trees and getting in water, the French re-embarked, when the islanders came down to the water's edge and discharged a volley of arrows, slightly wounding one sailor. Most of the islanders had cutaneous diseases, for which reason Bougainville gave the island the name of *L'Ile des Lépreux*. The next day he found himself surrounded by land in all directions, and he called the group *L'Archipel des Grandes Cyclades*. He sailed through the strait between Mallicollo and Espíritu Santo, now called *Bougainville Strait*, on the 26th of May, and continued his voyage in sight of the Solomon group. Bougainville imagined that the strait he discovered was the same as the great bay of St. Philip and St. James described by Quiros, who, the French explorer suggests, concealed the fact of its being a strait to prevent others from attempting to complete his discoveries by passing through it. But this idea is erroneous and gratuitous. In 1769 Captain (Surville), another French commander, visited some of the Solomon Islands.

Captain Cook examined the group, to which he gave the name of the *New Hebrides*, during his second voyage, when the learned Mr. Forster and his son were with him.† On the 18th of July, 1774, the *Resolution* sighted the northern point of Aurora Island, and passed very close to it, when the elder Mr.

\* 'Voyage autour du Monde, en 1766-69' (Paris, 1771), p. 242.

† 'Voyage Round the World in the sloop *Resolution*, Captain Cook, 1772-75.' By George Forster, F.R.S. (London, 1777), ii., p. 199.



Forster caught sight of the lofty "Pic de l'Etoile" through the mist. The whole of the next day was passed in working to windward between the islands of Aurora and Lepers; and on the 21st land was sighted, with columns of white smoke rolling up from the summit of an inland mountain. Both Captain Cook and Mr. Forster were enchanted with the beauty of these islands, and declared the groves to be the richest their eyes had beheld since leaving Tahiti. On the evening of the 21st they opened two islets to the south-east, one of which was a high volcanic peak; while at a great distance to the south appeared an island with three high hills. The *Resolution* then sailed towards the land to the westward, where the groves had the richest tints of verdure, coco-palms were scattered between them, and mountains rose far inland. The natives approached in canoes, waving green boughs, and the *Resolution* anchored in a bay, which was named *Port Sandwich*. Captain Cook was much interested to learn from the natives that the island was called *Mallicollo*, the very name of which Quiros had heard from the chief of Taumaco. He was also told that the island where he had seen the volcano was *Ambrym*, that the high peak was *Pa-oom*, and the island to the south *Apeè*. After leaving Port Sandwich the *Resolution* stood towards Ambrym; on the 24th she was within half a mile of *Three Hill Island*, and in the evening was becalmed amidst a group which Cook named the *Shepherd Isles*, after his friend the Professor of Astronomy at Cambridge. All the ward-room officers, several midshipmen, and the carpenter were very ill from eating a fish which Mr. Forster calls a sea-bream (*Sparus erythrinus*), doubtless the same poisonous food which made the Spaniards of the ship commanded by Quiros so ill. Cook's officers suffered acute headaches, spasms in the bowels, vomiting, and diarrhœa, but luckily the doctor escaped, from having dined with the captain. The sufferers were in a deplorable state, and could not do duty for more than a week, the watches being taken by the gunner and boatswain; but the doctor did not resort to the violent remedies of his Spanish predecessor Andrada. Passing a high columnar rock named *The Monument* and *Two Hill Island*, they stood south, towards an island to which Captain Cook gave the name of *Sandwich Island*, while he called the two smaller islands off its northern shore *Montagu* and *Hinchinbrook*. He then ran to the south, and on the 4th of August was off *Erromango*, where the boats of the *Resolution* were very treacherously attacked by the natives. The captain ordered his men to fire, and killed several, while the swivel and cannon were fired from the ship. On the 5th, Captain Cook stood on to the island of *Tanna*, and anchored in a small snug harbour, which he named

*Resolution Bay.* The volcano was in sight, a hill of a conical shape, whence a column of heavy smoke rose from time to time, and every time it rose they heard a deep rumbling; while in the evening the flames blazed up, and the deck and rigging were covered with black ashes. Cook set out, with the Forsters, to walk to the volcano on the 14th of August, but was prevented by the natives. He sailed on the 20th, and on the 21st saw the islands of *Anatton* and (*Erroonan*). On the 23rd he passed *Api* and *Ambrym*, and the north point of *Mallicollo*, and went through *Bougainville Strait* in the night, giving some small islets in the strait the name of *Bartholomew Isles*. He continued along the east side of *Espíritu Santo*, and opened the great bay of the *Spaniards* on the 25th, naming its eastern and western points *Capes Quiros* and *Cumberland* respectively. Captain Cook worked up to the head of the bay against a head wind; and one of his officers, Mr. Cooper, landed at *Quiros's* port of *Vera Cruz*, and saw the fine broad river *Jordan* of the *Spaniards*. The *Resolution* then sailed out of the bay. Doubling the northern end of *Espíritu Santo*, Captain Cook sailed down the western shore, and named the south-west point *Cape Lisburne*; standing once more into *Bougainville Strait* to complete the circuit of *Espíritu Santo Island*. He then stood away from the *New Hebrides Islands*, which he had cursorily examined during 46 days, and he recorded his opinion that the group was well worth the attention of future navigators. On the 4th of September Captain Cook discovered *New Caledonia*, and on the 15th he anchored off a district called (*Balade*). On the 24th he was off the eastern end of the island, and on the 26th he sighted a large island, which he called the *Isle of Pines*. The work of Mr. Forster contains a very full description of the *New Hebrides* islanders, their arms, ornaments, and physical characteristics.

The *New Hebrides* were next visited by the unfortunate expedition of *La Perouse*. The two ships which composed it, sailed from *Botany Bay* on the 26th of January, 1788, and their fate remained a mystery for forty years, when it was discovered that they had been wrecked on the reef round *Vanikoro Island* in a hurricane; that the survivors had built a brigantine, in which they had sailed away; but not a soul belonging to the expedition was ever seen again. In the same year, *Lieut. Shortlands* sailed from *Australia* in the *Alexander* along the *Solomon* group, giving the name to *Cape Henslow* on *Guadalcanal Island*.

The mutiny of the *Bounty* took place in the following year, and from May 14th to 15th, 1789, Captain *Bligh* passed through the northern islands of the *New Hebrides* group in an open

boat. He and his men were almost starving, but he justly deemed starvation to be preferable to being treacherously murdered and eaten by the cannibal islanders; so he did not venture to land. On the 13th, in Lat.  $14^{\circ} 17' S.$ , he saw low islands, and passed several on his weary way westward, to which he gave the name of the *Banks Group*. Among them are the Santa Maria and others discovered by Quiros.

Captain Edwards was sent out in search of the *Bounty* in the *Pandora* sloop, and on the 13th of August, 1791, he passed between the islands of *Vanikoro* and *Tapoua* (Edgecombe of Carteret) of the Santa Cruz group, and discovered the islands of *Cherry* and *Mitre* to the eastward. The *Pandora* was afterwards lost on a reef in Torres Strait.

In September, 1791, two vessels, the *Recherche* and *Espérance*, sailed from Brest in search of La Perouse, under the command of Captain D'Entrecasteaux.\* Coming from Tongataboo, they sighted the most southern islands of the New Hebrides group, Erronan and Annatom, on the 15th of April, 1793, and in the evening they saw the volcano of Tanna. D'Entrecasteaux asserts that Cook's longitudes are too far to the east. Sailing onwards, on the 17th he discovered the *Iles Beaupré* of the Loyalty group, and during the rest of the month he was at anchor at Balade, in New Caledonia. On the 9th of May D'Entrecasteaux sailed from Balade harbour, and on the 19th he sighted the southern point of the island of Santa Cruz. He passed the Edgecombe and Outry islands of Carteret (the Tapoua of modern charts) and found their positions to be very different from those given by that navigator, who passed them at a distance, and was disabled by sickness. D'Entrecasteaux fixed the positions on Santa Cruz Island more correctly, and then sailed along the southern side of the Solomon group. He died on board his ship on the 20th of July, 1793.

In 1796, the ship *Duff*, commanded by Captain James Wilson,† took out the first missionaries to Tahiti. Afterwards, on the 25th of September, 1797, the missionary ship sighted ten or twelve separate islands, two or three being of considerable size, and Captain Wilson named them the *Duff group*. They were, in fact, the islands, including Taumaco, which were discovered by Quiros in 1606. The *Duff* then sighted Santa Cruz and Volcano Islands, the latter emitting a large and bright flame every ten minutes. This was on the 28th of September, and the *Duff* shaped her course onwards to the westward, sighting

\* 'Voyage de D'Entrecasteaux, envoyé à la recherche de La Perouse' (Paris, 1808).

† 'A Missionary Voyage to the Southern Pacific Ocean, 1796-98, in the ship *Duff*, commanded by Captain James Wilson' (London, 1799), p. 296.



New Georgia. In the following year the East Indiaman *Barwell* sighted the island of Tecopia, previously discovered by Quiros, and in 1809 Captain Golownin visited Port Resolution and Tucopia.

In the early part of the present century, East Indiamen often made voyages from Calcutta and China to Hobart Town and Botany Bay, and in this way new discoveries were not unfrequently made. Thus in 1800 Captain Butler, in the *Walpole*, and in 1803 the *Britannia*, were the first to sight the Loyalty Islands. In 1813 Peter Dillon sailed as an officer on board the East Indiaman *Hunter*, from Calcutta to New South Wales. At Fiji a native of Stettin named Martin Bushart, and a Lascar named Joe, were found, who took refuge on board the *Hunter*, and they were both put on shore at the island of Tucopia. In 1826 Dillon had command of a ship of his own, named the *St. Patrick*, and hove-to off Tucopia on the 13th of May, on his way from Valparaiso to Pondicherry. He found Bushart and the Lascar still there, the natives having treated them with great kindness. Joe, the Lascar, had an old silver sword-guard. There were many things of European manufacture on the island, and the natives said that two ships had been lost on another island to the westward, many years before, called, as Dillon writes it, *Malicolo* (Vanikoro). He attempted to reach this place in May, but was becalmed, and eventually bore away for Calcutta. He was convinced that these clues would lead to the discovery of the fate of La Perouse, and on the 16th of September, 1826, he offered his services to the government of India, to clear up the mystery. The Governor-General, in Council, considered Captain Dillon's proposal favourably, and he received the command of the E. I. C. surveying-ship *Research*, with orders to follow up the traces he had found on Tucopia, and he sailed from the Hooghly on the 23rd of January, 1827.\* After visiting Hobart Town, New Zealand, and Tongataboo, the *Research* sighted Mitre and Cherry Islands on the 4th of September, 1827, and arrived off Tucopia on the following day, where he found five Englishmen, who said they had deserted from a whaler. Dillon describes the people of Tucopia as an extremely mild, inoffensive race, hospitable and generous, with straight hair, and entirely different from the hideous savages of all the surrounding islands, except Cherry. This accounts for the kind treatment of Bushart and other wanderers who had taken up their abodes with them. Since the visit of Quiros no vessel had touched at Tucopia until the

\* 'Narrative and Successful Result of a Voyage in the South Seas to ascertain the actual fate of La Perouse's Expedition.' By the Chevalier Captain P. Dillon (London, 1829, 2 vols.).

arrival of the *Hunter* in 1813. From the 13th of September to the 6th of October the *Research* was at Vanikoro, where Captain Dillon received a traditional account of the wreck of La Perouse's ships, and obtained many articles. Bushart returned to Tucopia, and the *Research* made sail to the eastward. Dillon landed on the island of Tapoua, and then sailed along the northern side of Santa Cruz Island to Graciosa Bay, where he had an encounter with the natives. He says that the length of the northern side of Santa Cruz is 24 miles, 14 less than it is made by Carteret. Dillon returned to Calcutta on the 7th of April, 1828.

Captain Dumont d'Urville\* heard of the discoveries of Dillon while lying at anchor off Hobart Town in December, 1827, in command of the French surveying-ship *Astrolabe*, and he resolved to make a thorough investigation of the fate of La Perouse on the spot. On the 8th of February, 1828, he sighted Mitre and Cherry islands, and on the 10th he was off Tucopia. Both D'Urville and Dillon give the native names of Cherry and Mitre Islands, as *Anuda* and *Fataka*, and they learnt from the Tucopians, who were of an excellent disposition, that all the surrounding islands, excepting Cherry, were inhabited by black woolly-headed cannibals, of whom they had a great horror. At Tucopia, D'Urville found Martin Bushart, who, however, refused to accompany him to Vanikoro, and three Englishmen who had deserted from the whaler *Harriet*, two of whom, named Hamilton and Williams, were allowed to embark on board the *Astrolabe*, and did good service as interpreters. Joe, the Lascar, was also at Tucopia. After making a fruitless search for the *Taumaco* of Quiros, D'Urville anchored at Vanikoro, and remained there, searching for further relics of La Perouse, from February 19th to March 17th, 1828. On the 14th of March a monument to the memory of the ill-fated expedition was completed. D'Urville obtained information respecting the Reef Islands discovered by Mendaña and Quiros, to the northward, and both he and Dillon give the native names of several islands. Santa Cruz is called *Indenney* (*Nitendi*?); the Volcano Island, *Tinacoro*; two islands in the Duff group *Taumaco* and *Chiciana*; and among the Reef Islands were mentioned *Nukapu*, *Pileni* (*Bānabi*?) and *Fonu-fonu*. Dillon and D'Urville gave names to 23 different points and bays round Vanikoro Island, and on the 17th of March the *Astrolabe* sailed from this island, which Dillon called *La Perouse* and D'Urville *Recherche*, and made sail for the Ladrones. D'Urville has given a full account of the islands of Tucopia and Vanikoro, and of their inhabitants, and

\* 'Voyage de la corvette *L'Astrolabe* pendant les années 1826-29, sous le commandement de M. J. Dumont d'Urville' (Paris, 1831), Histoire iii. v.

a vocabulary and love-song in the Vanikoro language. In 1838 Dumont d'Urville again commanded an exploring expedition consisting of the *Astrolabe* and *Zélée*; and in November he visited some of the Solomon Islands, fixed several positions, and anchored in Astrolabe harbour in Ysabel Island.

Captain Belcher, in the surveying-ship *Sulphur*, coming from Fiji, sighted Erronan, Annatom, and Tanna on the 20th of June, 1840, and anchored in Port Resolution. On the 24th he sailed, and sighted Erromango and Sandwich Island, and on the 1st of July he sighted Guadalcanal in the Solomon group, but he did not touch at any of the islands, except Tanna. In April, 1846, Captain Le Mignon, in the French ship *Jupiter*, sighted Mitre Island and sailed thence to the east point of San Cristoval, and along the south side of the Solomon Isles.

In September, 1849, Captain Erskine in H.M.S. *Havannah* visited Aneiteum, Port Resolution, sailed round Tanna, anchored in and named *Havannah Harbour* in Sandwich Island, and, after touching at the Loyalty Islands, New Caledonia, and the Isle of Pines, returned to Sydney. Captain Erskine visited the New Hebrides and Banks groups again in 1850. There is some account of Captain Erskine's proceedings in the Appendix to the 'Journal' of the Royal Geographical Society for 1851.\* Captain Denham† in the surveying-ship *Herald*, fixed several points in the southern part of the New Hebrides, and in the Solomon groups in 1853-4; but a more systematic survey is much needed.

All these expeditions, from Mendaña to Denham, covering a period of nearly 300 years, did little more than sail through the groups, and have deadly encounters with the natives. The three voyages of the old Spanish navigators accomplished as much as, or more than, any subsequent expedition. In his first voyage Mendaña made a more complete examination of the Solomon Islands than has ever been done since. Taumaco and other islands in the northern groups have never been examined since Quiros was amongst them in 1606, and his harbour of Vera Cruz, in Espíritu Santo, has only twice been visited since his time. Next to the Spaniards, our most complete accounts are of Tanna and Mallicollo by Captain Cook, and of Tucopia and Vanikoro by D'Urville. But the New Hebrides and other groups to the northward are still very little known, and indifferently surveyed.

Of late years these islands have been more thoroughly explored, and brought more prominently to notice, through the agency of two very opposite influences; that of unscrupulous traders, and that of well-intentioned missionaries. In about 1840 a very lucrative trade sprang up in sandal-wood for the

\* Vol. xxi. p. 222.

† See 'Hydrographic Notices, South-Western Pacific Ocean,' Nos. 2, 3, and 4.



supply of China, and at the time of Captain Erskine's visit, from ten to twenty vessels were engaged in it, and two establishments had been formed on shore for collecting it, one at Aneiteum and Erromango, the most southerly of the New Hebrides, and the other on the Isle of Pines. The men engaged in this sandal-wood trade were a reckless set of ruffians, and there were frequent attacks upon the natives, and retaliatory outrages. On Sandwich Island, in 1842, the crews of two British vessels shot down 26 natives who opposed the cutting of wood, and, having driven many others into a cave, they set fire to a pile of wood and rubbish at its mouth, and suffocated them all. All kinds of excesses were committed by the lawless adventurers, and numerous massacres were perpetrated by the islanders. Captain Erskine obtained a list of 14 vessels that had been engaged in these encounters between 1841 and 1848. In 1839 the London Missionary Society sent some native teachers from the Samoan Islands, with a view to the conversion, through their means, of some of the savages in the New Hebrides group; and they were established at Aneiteum, Tanna, and the Loyalty Islands. Messrs. Williams and Harris of the Samoan Mission, on landing on Erromango, in October 1839, were murdered on the beach, in revenge, it was supposed, for some outrage committed by sandal-wood traders; but the Samoan teachers continued at their work, and in 1849 they were visited by Bishop Selwyn. The New Hebrides Presbyterian Mission commenced their labours soon afterwards, and in 1852 Dr. Geddie published a version of St. Luke's gospel in the language of Aneiteum Island. There are now Missionaries on Aneiteum, Fotuna, Aniwa, Tanna, Erromango, Montagu or Nguna, and Espiritu Santo Islands. On Aneiteum all the islanders are Christians, on Aniwa there are 150, and on Fotuna 50 converts. These are the most southerly islands of the group. About eight years ago another Mission was formed, under the auspices of Bishop Selwyn, on a different principle. The new plan was to make yearly cruises among the islands, and to induce the people to allow their boys and young men to go back with the missionaries, to be educated, with a view to their returning home as Christians. This was the "Melanesian mission," over which Bishop Patteson presided. Their ground is north of that of the New Hebrides mission, in the Solomon, Santa Cruz, and Banks groups. Their station and school is in Norfolk Island, and the Bishop made an annual cruise in a yacht named the *Southern Cross*, touching at the different islands. Mr. Tilly,\* who commanded her, took every opportunity of adding to our

---

\* See 'Hydrographic Notices, Pacific Ocean (Western Part),' Nos. 21, 38, and 40.

knowledge of the islands, and the Reef Islands to the north of Santa Cruz, including *Lomlom*, *Nukapu*, *Pineli*, *Nivluli*, *Panavi*, *Tromelin*, *Nuponi*, *Analogo*, *Materna*, have been added to the chart on his authority. The chief missionary success of Bishop Patteson has been at San Cristoval or Bauro, one of the Solomons, and in the Banks Group. At *Mota* or *Sugar-loaf Island*, there is an ordained native teacher and several converts, and some impression has been made on the natives of *Vanua Lava*, where the anchorage was named by Bishop Selwyn, *Port Patteson*, in 1857, after the Melanesian Bishop. There are about 160 islanders at the missionary school on Norfolk Island.

The sandal-wood enormities of former years have been exceeded in the present labour traffic with its attendant kidnapping; which has arisen owing to the great demand for labour on the cotton plantations in the Fiji Islands and Queensland. In April, 1860, our associate, Dr. Berthold Seemann, who was sent out to the Fiji Islands to report upon their capabilities, by the Colonial Office, declared that they seemed to be made for cotton cultivation, an acre yielding 485 lbs. of the best New Orleans. The Fiji cotton proved to be of the qualities most desirable for British manufacture, and several plantations were formed in subsequent years. In Queensland the first cotton plantation was commenced near Brisbane, by Captain Towns, in 1863; and in 1866 he raised 183,630 lbs. of cotton. Thus the demand for labour arose both to the east and the west of the New Hebrides group, and its supply became a most lucrative business. Captain Towns was the first to have recourse to the importation of South Sea Islanders, sending one of his own vessels for the new labourers, and intrusting their engagement to a man named Ross Lewin, who had been long among the islands, and could make himself understood. Thus this labour traffic was commenced, and all the horrors of the old sandal-wood trade were renewed. In 1865 Commodore Sir William Wiseman, in H.M.S. *Curaçoa* visited the islands.\* On August 6th he was at Aneiteum, and from the 10th to the 12th the *Curaçoa* was at anchor in Resolution Bay in Tanna, where a fire with shell and rockets was opened upon two villages, and 178 men were landed to destroy villages and plantations, and to smash all the canoes on the beach. The Commodore then continued his cruise, touching at Erromango on the 13th, and Havannah Harbour on the 17th, and sailing between Espiritu Santo and Lepers Island to Port Patteson in Vanua Lava. The *Curaçoa* then stood along the northern coast of Santa Cruz,

\* 'A Ride through the Disturbed Districts of New Zealand, &c.; being Selections from the Journals and Letters of Lieut. the Hon. Herbert Meade, R.N.' (Murray, 1871), p. 230.

with Bishop Patteson in the *Southern Cross* in company. In the previous year two of the Bishop's boats<sup>t</sup> crew had been murdered in Graciosa Bay, but he did not wish any punishment to be inflicted on the natives, so the *Curaçoa* stood on to the island of San Cristoval, in the Solomon Group. After visiting Marau Bay in Guadalcanal, and St. George's Bay in Ysabel, the Commodore returned to Erromango, and anchored in Dillon Bay on the 10th of September. On the 25th he fired 20 shells and 4 rockets into a village, and it was supposed that frightful damage was done by the bursting of a shell in a cave, where the people had probably taken shelter. The *Curaçoa* sailed thence through Havannah channel to Numea in New Caledonia, and proceeded to Sydney on the 8th of October, 1865. Mr. Blenckley accompanied Sir William Wiseman on this occasion, and made large and valuable ethnological collections. It is not probable that this cruise was productive of any beneficial effect as regards the intercourse between the Europeans and islanders.

In April, 1867, Captain Luce of H.M.S. *Esk*, reported the loss of several vessels and numerous murders in revenge for islanders carried off to Queensland and Fiji. It was then found that 382 islanders had been landed in Queensland, most of them under engagements to work for three years, and that 78 had returned. A petition, signed by eight of the New Hebrides Mission, was presented in February, 1868, to the Governor of Queensland, denouncing the labour traffic and declaring that many labourers had been carried off by force. This led to the passing of the "Polynesian Labourers Act" by the Queensland legislature, in March, 1868; which was intended to enforce the registration of labourers, their proper maintenance and support, and their return at the expiration of contracts. But it is said to be of little use in ameliorating the condition of the unfortunate islanders, and the labour traffic, with its attendant kidnapping, continues in full vigour. Plantations have also been formed on the New Hebrides themselves, at Aneiteum, Tanna, and Vate or Sandwich Island, and there is a whaling station at Erromango.

In 1868 H.M.S. *Blanche*, commanded by Captain Montgomerie was sent to investigate the massacre of the crew of an English vessel in the Solomon Group. Sailing from New Caledonia, she touched at Wanderer Bay in Guadalcanal, and then proceeded to New Georgia, the scene of the outrage, where a village was shelled and burnt. The *Blanche* returned by the east coast of Guadalcanal and San Cristoval to Port Patteson in Vanua Lava, and thence, by Sandwich Harbour in Mallicollo, and Dillon Bay in Erromango, to New Caledonia. In the same year Commodore Rowley Lambert in H.M.S. *Challenger*, coming from



Fiji, visited Tanna and the other southern islands in the New Hebrides Group. In 1869 the *Rosario*, then commanded by Captain Palmer, also touched at the most southerly islands of the group, which are now well known.

The cruise of the *Rosario*, from October 1871 to February 1872, was undertaken in consequence of the increasing complications, caused by the lawless acts of vessels engaged in the labour traffic, and of consequent retaliations on the part of the islanders; and the duties connected with the investigation of these questions necessitated visits to almost every island in the Santa Cruz and New Hebrides groups. Thus many places were visited at which no man-of-war had ever touched before, landings were effected on islands scarcely ever touched at, and long walks were taken into the interior of many little-known islands.

These islands lie in a N.N.W. and S.S.E. direction, along a distance of about 700 miles, between the parallels of  $9^{\circ} 45'$  and  $20^{\circ} 16'$  S. latitude, and the meridians of  $165^{\circ} 40'$  and  $170^{\circ} 30'$  E. longitude. The large island of New Caledonia lies at a distance of 200 miles to the south-west of the southern part of the group, and the Solomon Islands are about the same distance due west of the most northern part; while the Fiji Islands are the nearest land to the eastward. There are three distinct groups, divided from each other by intervals of 60 miles of sea; namely, the south New Hebrides, the north New Hebrides and Banks Islands, and the Santa Cruz, Duff, and Swallow groups; while east of the latter, at a distance of 60 miles, are the isolated islands of Tucopia, Cherry, and Mitre.

The southern New Hebrides consist of the following five islands:—

*Aneiteum*, 27 miles long by 21 broad; highest peak, 2788 feet.

*Fotuna*, 4 miles long; highest peak, 1931 feet.

*Tanna*, 23 miles long by 40 broad; highest peak, about 3000 feet.

*Aniwa*, highest peak, 300 feet.

*Erromango*, 30 miles long by 22 broad; highest peak, 3000 feet.

The northern New Hebrides and Banks Islands, which are in reality but one group, consist of about 35 islands, besides numerous islets and rocks; *Espíritu Santo*, the largest, being 75 miles long by 40 broad, and the average size of the islands being about 60 miles round. Commencing from the south, the larger islands of the group are as follows:—

*Vate* or *Sandwich Island*.

*Api*, 25 miles long by 70 broad; highest peak, 2800 feet.

*Mallicollo*, 50 miles long by 20 broad.

*Ambrym*, 22 miles long by 17 broad; highest peak, 3500 feet.

*Pentecost*, 30 miles long by 5 broad; highest peak, 2000 feet.

*Lepers*.

*Aurora*, 30 miles long by 5 broad; highest peak, 2000 feet.  
*Espiritu Santo*; about 70 miles long by 40 broad.  
*Santa Maria*; highest peak, 2000 feet.  
*Vanua Lava* (pop. 1500); highest peak, 2800 feet.  
*Torres Islands*, five in number.

And the principal smaller islands are:—

*Nguna* or *Montagu*.  
*Hinchinbrook*.  
*Three Hills* (or *Mei*), 6 miles long by 2½ broad; highest peak, 1850 feet.  
*Paama*; highest peak, 1900 feet.  
*Lopevi*; highest peak, 5000 feet.  
*Bartholomew*.  
*Star Peak*; highest peak, 2900 feet.  
*Mota* (or *Suga-loaf*); pop. 2000, 8 or 10 miles in circumference;  
 highest peak, 1350 feet.  
*Valua* (or *Saddle*), about 8 miles long; highest peak, 1800 feet.  
*Ureparapara*, nearly round, about 12 miles in circumference; highest  
 peak, 1950 feet.  
*Vatu Rhandi*; highest peak, 100 feet.

From Vate and Nguna to Mallicollo and Ambrym the islands form a cluster; they then, as it were, fork into two lines, forming a large bay, with Mallicollo and Espiritu Santo on the west, and Pentecost and Aurora on the east side; while the Banks Islands again cluster at the northern entrance to this bay.

Both New Hebrides groups consist, with the exception of the Torres Isles, of islands of volcanic formation; but the Santa Cruz group, besides islands of volcanic formation, also contains, in its northern part, numerous reef islands. The volcanic islands are *Santa Cruz*—itself the largest, about 24 miles by 10—*Vanikoro*, *Tevai*, *Lord Howe*, *Tapua*, and *Tinakula*. The reef islands are all further north. The most northerly of these groups, those discovered by Quiros, and named the Duff Islands by the old missionary ship in 1796, are almost entirely unknown; and the account of one of them, called *Taumaco*, by Quiros and Torres, is almost the only knowledge we at present possess. It is, however, reported that one or two are of volcanic origin.\* The other reef islands to the west, which were discovered by one of Mendaña's ships in 1596, and named Swallow Islands by Captain Carteret, were first examined by Bishop Selwyn in 1856 and 1857, and afterwards by Bishop Patteson and Mr. Tilly in the *Southern Cross*. There are about a dozen, the largest of which is *Lomlom* Island. Their names are:—

*Lomlom*, 5 miles long by 1¼ broad; 300 feet high.  
*Fromelin*.  
*Sand Islet*; 10 feet above water.  
*Pileni*, 1 mile, 100 feet.  
*Nivoluli*, 1 mile, 120 feet high.

---

\* See 'South Pacific Directory.'

*Panavi*, well wooded.

*Nukapu*; 1 mile long.

*Nimanu*, a small round bold-looking island; 200 feet.

*Nupani*.

*Análogo*.

*Matema*.

*Round*.

These reef islands occupy an extent of about 42 miles in a west by north direction from *Nimanu*, the most south-eastern of the group, to *Nupani*, the most north-western. They are from 20 to 200 feet above the sea, and extensive reefs stretch out, some from their lee and others from their weather sides. Whilst proceeding round the south side of the reef islands, and as far as Nukapu, I kept continually sounding, and got no bottom with 120 fathoms of line, the water being deep close alongside the coral reefs.

The three small islands to the eastward are isolated, and can scarcely be said to belong to the groups, being separated by about 60 miles. They are:—

*Anuda* (*Cherry*), 300 feet high;  $1\frac{1}{2}$  mile round.

*Futaka* (*Mitre*), 450 feet high; a barren rock.

*Tucopia*.

Although situated between New Caledonia and the Fiji Islands, which are two of the most extensive coral regions in the world, the New Hebrides have scarcely any reefs; and the first that are met with, coming from the south, are those round the island of Vanikoro, in the Santa Cruz Group. This absence of coral is attributed, by Dana, to the destruction of the zoophytes by heat, consequent on volcanic action. Submarine eruptions, which are frequent as long as a volcano near the sea is in action, heat the water and destroy whatever life it may contain.

The line of volcanic activity in these islands is, in the general direction of the group, about S.S.E. to N.N.W. A line drawn from the active volcano of Tinacula to that of Tanna, a distance of 600 miles, nearly passes through the volcano of Ureparapara, the boiling springs of Vanua Lava, and the two active craters of Ambrym and Lopevi. The line also passes through Santa Cruz, Santa Maria, the southern part of Pentecost Island, and Api; on all of which there are cone-shaped hills, which have the appearance of extinct volcanoes. The *Rosario* was becalmed off the volcano of Tinacula during the whole of the night of November 28th, and passed it again on the 29th. It is a perfect cone, rising out of the sea to a height of 2200 feet; with the base, to about a third of the way up, clothed with verdure, and the upper two-thirds quite bare. During the two



days there were outbursts of flame and smoke at intervals of from ten to fifteen minutes, and in the intervals the stream of burning lava poured down the N.N.W. side of the crater in a continuous brilliant stream into the sea. This volcano appears to be in a permanent state of activity, for in 1595 Mendaña found that the same eruptions were taking place; and though Captain Carteret only records volumes of smoke as issuing from the crater in 1767, it was emitting a large and bright flame when the *Duff* passed the island in 1796. Following the line of volcanic activity to the south, the next phenomenon is met with on the island of Vanua Lava, where there are boiling springs about half-way up the central hill, on its northern side. We could see the steam rising up from amongst the trees, and mingling with the dense clouds overhead. Further south, on the same line, is the volcano of Ambrym. We were becalmed at a distance of 3 miles from the north coast of the island, and about 14 miles from the crater, as the crow flies. Explosions were distinctly heard at intervals of 15 minutes, some louder than others. The ship was thickly covered with fine dust of a brownish colour; but the volcano itself was concealed from our view by an intervening range of hills. Captain Cook mentions having seen columns of white smoke rolling up from the hills; but, at the time that we were off the island, the clouds were so low that I was unable to distinguish the smoke with certainty, though I anxiously watched the line of hills for three hours. When on the south side of the island, however, we saw the Ambrym volcano blazing up several times during the night of the 29th of December. Lopevi, a small island to the south of Ambrym, closely resembles Tinacula. It also is a perfect cone, rising from the sea; but it is nearly double the height of Tinacula, and the base is proportionately larger. The summit of the crater was carefully watched during two days and nights, but heavy clouds were generally hanging round the summit, which obscured the view. When, at intervals, the peak was clear, I observed a thin film of smoke rising into the air; but no explosions were heard, and, as compared with Tinacula, Ambrym, and Tanna, the volcano of Lopevi was quiescent at the time of our visit.

The most powerful volcano in the group is that of Yasowa, on the island of Tanna, the most southerly in the line of volcanic activity. It is about a mile from the sea at Sulphur Bay, but eight miles from the head of Port Resolution. We landed at half-past six in the morning, with the intention of visiting the crater, accompanied by Mr. Neilson, the missionary. On approaching the summit of the first range, at a height of not more than 500 feet above the sea, we came to a series of patches

where there were hot sulphur springs near the surface, and steam was oozing from numerous crevices. In proceeding through very thick bush, and in crossing ranges of undulating hills in the direction of Mount Yasowa, we heard loud reports, sounding like broadsides from a line-of-battle ship, at rapid intervals. After walking for about seven miles and a half we suddenly emerged from the bush, and came upon an open space covered with loose scoria, with the bare cone rising about 600 feet above the place where we were standing. After scrambling up the steep side of the mount, through loose scoria, for about 300 feet, we came to the foot of the actual crater. Here the native guides refused to proceed further, and warned us that, if we persisted in attempting the ascent, we must preserve perfect silence. These Tannese believe the volcano to be an evil spirit, whose anger would be aroused by any noise not produced through his own mighty throat. On reaching the upper lip, we found ourselves on a ridge, about 14 feet wide, with a perfectly perpendicular cliff on the inner side. The opening is about 700 feet long by 500 wide, and I judged that the depth, from the ridge to the burning lava, was about 200 feet. During the intervals between the explosions there appeared to be three distinct openings from which the explosions took place; and after the explosions we could see sheets, as it were, of liquid fire flowing back into their beds. I timed the explosions, which took place every three minutes. They were accompanied by a deafening report, the shocks were distinctly felt, and huge masses of scoria were hurled up to a height of fully 1000 feet. The great mass fell back into the crater, but some pieces fell upon the ridge, to leeward of the place where we were standing. Great clouds of dust and smoke were sent up at the same time, which at times obscured the summit of the mountain, in looking at it from seaward. At the foot of the volcano, on the north side, there is a fresh-water lake about a mile long, and 200 feet above the level of the sea.

The line of volcanic activity has the largest islands on either side, a little apart from the actual eruptions; but the numerous conical peaks in every part of the groups seem to indicate a period of activity on every island. The water is very deep round all the shores, and the hills, rising abruptly from the sea, are clothed with dense vegetation. The coco-nut trees are not confined to the beach, but often grow on the hillsides, and are seen in clusters all over the inland valleys. This is especially the case on the island of Ambrym. Trees, yielding excellent timber, grow on the slopes of the hills; such as the weeping iron-wood (*Casuarina equisetifolia*, Forst.), *Casuarinas*, and the

beautiful candle-nut trees (*Aleurites triloba*, Forst.). Graceful ferns and branching grasses cover the ground, and numerous flowering shrubs form a dense undergrowth. I had no opportunities of examining the *flora* at a greater height than 2000 feet, and am not able to describe the change from tropical to mountain forms. The New Hebridans make neither mats nor cloth, but both the screw-pine and the paper mulberry are found on the islands, and the distinct race inhabiting Cherry Isle have *tapa* cloth which they prepare from the latter plant. The rich vegetation, which entirely covers the islands, is varied and beautiful; and every voyager, from the days of Mendaña, has been enchanted by the loveliness of the scenery. The groups farther to the eastward, and beyond the 180th meridian, to Tahiti and the Marquesas, appear to have been dependent, for their *flora* and *fauna*, on the waifs and strays that floated or were wafted to them from distant continents. But the Solomon and New Hebrides groups, together with the Fiji Islands, possess a rich and varied *flora* and *fauna* peculiar to themselves, which has not hitherto been thoroughly examined, although the admirable work of Berthold Seemann is an important contribution towards a more complete knowledge of this interesting subject. I regret that I am unable to add any additional information, and that my very absorbing duties entirely precluded any attempt on my part to make collections in natural history.

The reef islands, in the northern part of the Santa Cruz Group, are not regularly formed coral islands, with central lagoons, such as are formed in Torres Straits; but are raised upon the reefs themselves, and vary in size from small rocks or islets, to islands several miles in circumference. They are generally covered with dense scrub, overtopped by coco-nut trees, and wherever this is the case, as at Lom-lom and Nukapu, they are inhabited.

The deep and beautifully transparent sea which surrounds the islands abounds in fish of various kinds; the usual yield, when we hauled the seine, consisting of mullet and bream. At Tanna we were warned, by a native, of the poisonous fish which had so serious an effect upon those who partook of them, both on board the ship of the old Spanish navigator Quiros, and in that of Captain Cook: but none were caught by us. On the island of Fotuna, which has no reef, and is surrounded by deep sea, I looked down from the summit of a perpendicular cliff into the transparent water, and saw fish swimming among the rocks, of the most brilliantly bright green and blue colours. Attracted by the fish, the bare and unfrequented rocks are the haunts of myriads of sea birds of every kind that is known



in the tropical zone of the Pacific ; and, in the woods, there are large pigeons with gay plumage.

The inhabitants of the New Hebrides and Santa Cruz groups belong to that Papuan or Melanesian race which may be said to extend from New Guinea to the 180th meridian, where, in the Fiji Islands, it mingles with the stronger and more handsome Polynesians. In the New Hebrides some differences are discernible as regards the inhabitants of the various islands. As a rule the men of the southern New Hebrides are taller and better developed than those farther north. In Tanna there is a finer and stouter-made race than in any of the other islands. The Erromango men are smaller ; and in Santa Cruz the men are all short and slight, but wiry and active, and of a cheerful disposition. In Tanna very few men were seen who were taller than 5 feet 7 inches, while at Santa Cruz none were seen to exceed 5 feet 5 or 6 inches. At Espíritu Santo the men appeared to be intelligent, but they were not equal, as a race, to the Tannese.

The New Hebrides islanders are not a good-looking race. The forehead is low and receding, the cheek-bones and face broad, the nose flat, but not so flat as the nose of an African negro, and large mouths. The hair is woolly, and the grown men have close woolly beards and whiskers. The skin is sooty or nearly black, and cutaneous diseases are very prevalent. In most of the islands they are fond of painting the face and body with red ochre, white lime, and a black colour, all mixed with coco-nut oil, in oblique bars. They make large holes in the ears, whence to suspend ornaments ; and they raise scars on the breast and arms. Various ways of dressing, or ornamenting the hair, prevail in the different islands ; the most extraordinary being that which is the fashion in Tanna. Very small tufts are bound round with the stalk of a grass, so that a small piece is left to curl over the end of the binding. The whole of the head of hair is dressed in this way, and it is said that the operation takes three or four years to complete. In most of the islands it is a common, though far from a general custom, to colour the hair with *chunam* or turmeric, so as to give it a yellow tint ; and at Espíritu Santo the warriors fasten a cock's tail-feathers at the back of their heads. Round the neck they wear necklaces made of human teeth, shells, and coco-nut. At the island of Santa Cruz they wear large tortoise-shell rings through the noses, with a chain of seven or eight, and sometimes as many as twelve in each ear, hanging down over their shoulders. Breastplates made of white shell, and of various sizes, from  $5\frac{1}{2}$  to 9 inches in diameter, are also worn by the chiefs of the Santa Cruz and Swallow groups. In most of

the islands one fore-arm is ornamented with a bracelet, often of shell-work and coco-nut, worked in zigzag patterns. In the Solomon Islands they wear a very large shell armlet. With the exception of these ornaments, and of a string fastened tightly round the waist, to which the apron is secured, both men and women go perfectly naked.

I saw two Albinos, one a male, belonging to the island of Mallicollo, the other a female, a native of the island of Nguna, the latter without exception the most hideous and repulsive-looking woman I ever saw. Her skin was as fair as any man's in the ship, with huge red blotches or freckles over the face and arms, wool of a yellowish colour, eyes small, receding, and very weak, of a pinkish hue; nose flat, and mouth large, with thick lips. This delicate creature was one of the wives of a chief at the island of Nguna, and had been stolen by white men, not for her attractions, but for the sake of her labour, to work on a plantation. I released her from bondage and, after having had the pleasure of her society for three or four days, restored her to her heart-broken husband,

The value of a wife, amongst these islands, is generally estimated at about three pigs, which, when a man is able to get them, entitle him to the hand of a dusky beauty. The men do little or no work, beyond fighting, hunting and fishing, except when they harvest the yearly crops of yams. The signal for planting this crop is the ripening of the *Erythrina Indica* in July, when rows of hillocks are thrown up with staves, on the top of which pieces of old yam are set up, which soon begin to sprout. In a month they require reeds on which to climb; in February they begin to ripen, and the crop is taken in March or April. The people count by yam crops instead of years, and when they agree to go as labourers to Queensland or Fiji, the time is counted at so many yams. Their chief food is yam mixed with coco-nut. Taro is also grown on most of the islands, generally on irrigated land, but sometimes as a dry crop. It is fit for eating at about the time when the yam crop is exhausted. The flesh of pigs is consumed, and occasionally fish and fowls, but always at their large feasts; and whenever human food can be procured, it is much sought after. All the men are habitual *kava* drinkers.

The huts vary in size on the different islands; some being large, commodious, and well ventilated; others small, low and dirty. They are all roofed with the leaf of the coco-nut tree, some circular, others oblong or square, and they contain no furniture of any description. On the island of Santa Cruz, Mendaña describes them as circular, and resting on a central pole exactly as they are built at the present day. In the Banks

Group the houses consist of three rows of posts, the two outer ones 5 feet clear of the ground, and the centre one 15 feet, each row supporting a horizontal beam fastened by coco-nut fibre, with other beams meeting diagonally on the centre row. The roofs are of coco-nut leaves with projecting eaves, and the walls of matting.

The property of the islanders consists in land and coco-nut trees; and theft, as well as murder, is, I was informed, usually punished with death.

At some of the islands I have seen idols which they profess to worship; but I believe that they have little or no idea of a divinity or a hereafter. In 1595 Mendaña's historian tells us that on the island of Santa Cruz there was, in each village, a large house containing rudely-carved wooden images in half relief, and Mr. Dillon mentions that in Vanikoro there were large houses, in each village, set apart for the use of disembodied spirits. I had no time to investigate this interesting part of the subject, and I believe that much may yet be learnt respecting the superstitious ideas of these islanders.

The languages or dialects, in the different islands, appeared to us to be totally distinct; and, on some of the large islands, such as Espiritu Santo, a man from Cape Lisburne, at the extreme south, is unable to make himself intelligible in a village 40 miles up the coast. Latham says that there are also at least two dialects in Erromango. Quiros is said to have collected vocabularies of the language in Taumaco (Duff Group); and vocabularies in the Tanna and Mallicollo dialects are given by Cook. D'Urville collected a vocabulary of the Vanikoran dialect, and gives a specimen of a love song. Dr. Geddie published the Gospels of St. Luke and St. Mark at Sydney in 1852 and 1853, in the language of Aneiteum, the most southerly of the New Hebrides Islands; and there is a manuscript grammar of the Tanna language by Mr. Heath. It has a peculiar form by which three persons may be spoken of, distinct from dual or plural, and abounds with inflections. Captain Cook remarks upon the harsh sound of the New Hebrides dialects, and notices a peculiar sound formed by the shaking and vibration of *brr* at Mallicollo, which, however I did not notice.

The islanders are very fond of dancing, to the accompaniment of a plaintive air, and in admirable time. All voyagers have noticed this love of dancing. The companions of Quiros observed it, and Captain Carteret mentions having seen large numbers of people on Santa Cruz island, dancing in a ring.

Their arms consist of bows and arrows, spears and clubs; but on the southernmost islands of the New Hebrides Group, many

of the men are now armed with guns supplied to them by traders engaged in the labour traffic, who give them as wages to returning labourers, and as bribes to the chiefs for allowing the traffic. On some islands, where there has been much intercourse with white men, they have converted the heads of axes, which they have received in exchange for yams, &c., into formidable-looking tomahawks which, in the hands of brave and skilful men, are most dangerous and unpleasant weapons.

The clubs are of different shapes, and are generally wielded with one hand, though they also have large double-handed ones. At Erromango the star-headed club is the most common, while in the northern islands the plain smooth clubs, some with knobs or buttons at the end, are most in vogue. Clubs in shape of canoes are seen at the Santa Cruz Islands. At the Solomon Islands they have sharp two-edged clubs, grafted over with a sort of sennit, and some of them are very handsomely finished off. The most valuable clubs are made of *Casuarina* wood, and are four feet long, straight and polished. One kind has a flat piece projecting at right angles to the handle.

The bows are made of *Casuarina* wood, and are well polished, and about 5 feet long. They are drawn from the shoulder. The arrows are of reed and vary in length, the shortest being 3 feet 6 inches and the longest 4 feet 6 inches. Many of them are tipped with human bone, a peculiarity which is recorded by the Spanish navigators in 1595, and these have several barbs. Others are plain sharp-pointed weapons; but the only arrows that I have seen with feathers are those used for the purpose of shooting fish and birds. Some of the latter are merely blunt round-topped bolts. All the arrows used in war are poisoned; but I have been unable to ascertain the nature of the poison, or whether it is animal or vegetable; though I was told on good authority that, on the death of a native, the arrows are stuck into the kidney fat of the corpse, and allowed to remain until decomposition sets in. Men wounded by these poisoned arrows generally die from tetanus. Mr. Dillon has a story that at Vanikoro the poison is obtained from a nut the size and shape of a mango, that they break the shell, scrape the kernel with the thumb nail, and rub the juicy substance, mixed with lime, on the arrow head. He adds that he took 200 of these nuts to the Botanical Garden at Calcutta. But as Mr. Dillon admits that a pig, wounded with an arrow so poisoned, remained in perfect health, I am inclined to think that he was taken in. Dr. Seemann says that, in the Fiji Islands, vegetable poisons are extracted by the natives, who make a profound secret of the art. In the southern islands they use cylindrical covers of



leaves as quivers; but in the north they carry a handful of about 7 or 8 arrows in one hand, which they put down when they take aim.

The spears are from 12 to 18 feet in length, and are generally barbed at a distance of about 3 feet from the tip. Some are very handsomely carved. They are very expert in the use of these weapons, and in one instance, at Tanna, a man was asked to take a shot from the quarter-deck at the fore topmast studding-sail boom, a distance of about 90 feet. The arrow struck exactly at the part aimed at, on which he shot off a second arrow, and cut the first out of the boom; both falling into the sea.

During their engagements with each other, one of which I witnessed in Byron Bay, at Santa Cruz Island, they kept continually shouting, moving and dancing about, so as not to show a steady mark to the enemy, stopping merely to fix and discharge their arrows, which they can send to a distance of about 120 yards. Each individual apparently fights on his own account, and under no leadership or regular order of battle. The chiefs, however, occasionally assign a mark to each of their men. Before making an attack there is a peculiar warning shout or cry, on hearing which the women and children immediately retire out of danger. Their disappearance is a sure sign that treachery is intended. As we sailed along the coast, fires were lighted, one after the other, on the hill-tops, apparently as signals. The same thing is mentioned by Captain Cook and other voyagers.

On Santa Cruz and Nukapu they have regular fortifications, consisting of stone breastworks about 4 feet 6 inches high, built in a semicircular form, and thrown up in alternate lines, in front of the villages, which are for the most part built near the sea. I examined these breastworks on the island of Nukapu; and both the historian of Mendaña's voyage, and Captain Carteret, describe exactly similar works on Santa Cruz Island. Carteret, who only saw them from his ship, describes them as built in salient and retiring angles; but in reality they are semicircular and isolated, and merely have the appearance of continuous lines, because the rows are built alternately, the rear ones filling up the intervals left in front.

The canoes are small, not being more than 20 to 30 feet long, and they are all fitted with outriggers. They generally contain two or three people, though I saw some, at the Solomon Islands, which were over 90 feet in length. The islanders are very expert in handling these canoes, and I was surprised at the dexterous manner in which I saw a couple of islanders right one

of the canoes that had been capsized. They use short paddles with cross handles and long blades.

The islanders are a merry, cheerful race, though easily alarmed. When the ship came into Byron Bay, at Santa Cruz Island, she was immediately beset by about 150 canoes, containing some 300 people. Shortly after we anchored the bugle sounded to evening quarters, on which the ship was instantly deserted, and it was some time before confidence could again be established. But they had no sooner returned, and found that no harm was intended to them, than the order was given to send the top-gallant-masts down; at the word "Aloft" they saw the rigging crowded with men, and a panic again ensued among the natives, who did not return until they saw the yards and masts coming down. On the following morning we were engaged in clearing the after-hold, when several of the natives began to help in manning the whip, which seemed to give them great amusement, though they did little work, always hauling at the wrong moment, and not pulling when required. The fiddle and bugle were objects of great curiosity in their eyes.

One of the most interesting points connected with the natives of these islands is the way in which the handsome Polynesian race seems to dovetail among the Papuans or Melanesians of the New Hebrides. Several islands are certainly inhabited by Polynesians, which belong geographically to the Melanesian groups. I landed on Cherry Island, and found that it was inhabited by a handsome and friendly Polynesian race, with straight hair. One man was 5 feet 10½ inches in height, and weighed 228 lbs. The population was about 200. The island of Tecopia is inhabited by the same race. Dillon and Dumont d'Urville describe the Tecopians as an extremely mild and hospitable people, numbering about 400 souls, under four chiefs. It would appear also, from the accounts of Quiros and Torres, who visited them in 1606, that the Duff Islands are also inhabited by the same Polynesian race. It would not only seem so from their kind and hospitable character, but the inhabitants of one isle, called *Chicayana*, are distinctly stated to have long, straight hair. In the voyage of the *Duff* these people are described as stout and well built, with copper-coloured complexions. With regard to the Swallow or Reef Islands, I was under the impression that the inhabitants belonged to the Melanesian race. The men who came alongside, off Lom-lom, the largest of the group, certainly had woolly hair, and were like the people we saw at Santa Cruz. At Nukapu I only saw the men's heads behind a stone breastwork, with a poisoned arrow pointed at me, so that I could not make a very leisurely examination; but they also certainly appeared

to have black Papuan skins and woolly hair. I have since read that the late Bishop Patteson found that they spoke a dialect of Maori, and he classed them among the Polynesians; and this appears rather to increase the puzzle, if the adjacent island of Lom-lom is inhabited by Melanesians. The men of Tecopia expressed to D'Urville the greatest abhorrence of their woolly-headed neighbours of the New Hebrides and Santa Cruz groups, so that they can scarcely live otherwise than as enemies to each other; and their mingling in small islands of the same group becomes all the more curious. The Cherry Island people are cleanly, they manufacture *tapa*, make very fine matting, and form a contrast in every way to the filthy savages of the New Hebrides and Banks groups. It would be a very interesting point to ascertain the exact limit of the two races, and to discover the Polynesian group to which the Cherry Islanders and Tecopians are most closely allied, as regards language and traditions. Time did not admit of my even attempting to investigate this and many other points of great interest; but I feel sure that there is much still to learn which would well repay the study, and that future visitors to these islands will have before them a very important field for geographical and ethnological research.

---

IX.—*Summary of Observations on the Geography, Climate, and Natural History of the Lake Region of Equatorial Africa, made by the Speke and Grant Expedition, 1860–63.* By Lieutenant-Colonel J. A. GRANT, F.R.G.S., C.B., C.S.I.

THE late Sir Roderick Murchison, our respected President, after presenting me with the Patron's medal of the Royal Geographical Society, impressed upon me the necessity of giving, for publication by the Society, some account of the journey through Africa, made in company with Captain Speke.

He had two reasons for this: one, that there ought to be a "quid pro quo;" and the other, that Captain Speke had made only a very small contribution, which appeared in the thirty-third volume of the Society's Transactions.

I have hitherto hesitated to comply with Sir Roderick's request; but I feel now that the duty is incumbent upon me, as the survivor of the expedition; and I submit these notes, with due respect, to the Royal Geographical Society.

True, Captain Speke's contribution of twenty-five pages was small when the vast extent of country traversed—the large field for description—is taken into consideration; but, when we