

an altar, with a cloth spread over it, in front of pipes resembling those of an organ. In one gallery the roof appears to be studded with lilies carved out of alabaster. As one descends to the lower galleries the sensation is decidedly weird; the gurgling and reverberations of swiftly flowing water is heard deep down in dark subterranean channels which are evidently connected with the sea, for, ever and anon, a mighty gust of wind impelled by the huge rollers breaking on the reef outside strikes the visitor, and it requires a steady nerve and a firm foothold to avoid being swept into the seething cauldron below. If these caves were in an accessible position they would be a great draw to tourists. Many of the Native graves are marked with headstones made out of large stalactites.

The Natives.—There are various types of Natives on Niue, some being akin to the Maori, others more like Kanakas, and some even with a Japanese cast of countenance. I had a number assisting on the survey, and they proved themselves industrious, obliging workmen, with quite as much intelligence as an equal number of Maoris. I found the residents, both the white traders and the Native chiefs, most hospitable, and they did all they could to facilitate my work.

Sun-dial for Alofi.—While at Niue I calculated the figure of a dial corresponding to the latitude of Alofi for Mr. Maxwell, and gave him the true meridian at a spot in front of the Government Buildings. With this and a table of the sun's daily variation he will be able to maintain correct mean time for the island.

Record of Plans.—I would respectfully suggest that the original plans which I send in should be kept either in the Wellington or Auckland Survey Offices, and that a mounted tracing with full details should be sent to Mr. Maxwell. He proposes when he has time to make magnetic traverses of the cross-roads, and he could then fit them into place. I would also suggest that if a tracing is sent to the Admiralty, some extracts from this report, showing the instruments used and method adopted in the survey, should also be sent to enable them to judge what reliance to place on the work.

Cost of Survey.—Apart from the cost of labour and material and the special allowance authorised by the Hon. Mr. Mills, I am doubtful what proportion, if any, of my salaries should be charged against the work, but as, before leaving New Zealand, I had traversed sufficient roads and schemed out enough sections to keep my party under Mr. Cadet Clarke busy the whole time I was away, I think a fair way would be to charge half my salary to this work and half to Niue. Acting on this basis the cost works out as follows:—

	£	s.	d.
To half three months' salary	33	15	0
Special allowance for ninety-one days at 15s.	68	5	0
Labour and material (already paid by Mr. Maxwell)	42	18	1
Fares—"Countess of Ranfurly," £15; Captain Ross, £3; Union Steamship Company, £10 10s.	28	10	0
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	£173	8	1

This is equal to less than $\frac{2}{3}$ d. per acre, without allowing anything for the six reserves laid off. Even if all the salary were charged against this work it would only amount to a little over $\frac{2}{3}$ d. An equivalent Native Land Court survey in New Zealand at the schedule rate of 3d. per acre would come to about £800, without allowing anything for travelling-expenses.

Suggestions.—During my stay on Niue there were some matters which came under my observation upon which it may not be out of place to offer a few suggestions. One of these is in regard to a water-supply. Niue has no streams whatever, and the Natives, who have no tanks, have to depend on water obtained from caves, often half to three-quarters of a mile from their dwellings. This is carried in cocoanut-shells hung on the end of a stick, so that the supply after a long journey is very limited, besides being heavily charged with lime. This is not conducive either to health or cleanliness in the people. The remedy I would propose is that, as surplus funds of the island administration allow, large storage-tanks should be made in the coral rocks at each village and plastered inside with cement. These could be cheaply constructed, and if roofed over with galvanised iron the tropical rains would soon fill them. There is not the least doubt they would prove an immense boon to the inhabitants.

The Natives are very expert in adzing out and squaring the planks for the frames of their houses, but this is a tedious process besides being very wasteful in regard to the timber. If it could be arranged for two or three intelligent young fellows to be brought up to New Zealand for a few months and put with pit-sawyers, they on their return to Niue could teach others, and thus a great saving in labour and material would be effected. In the same way, if a few could be apprenticed to blacksmithing and carpentering it would be a fine thing for the island. As it is, Mr. Maxwell tells me that when the road parties come in with picks and drills to be sharpened, he has to work at the forge himself, as none of the men understand anything about it.

In conclusion, I beg to tender my best thanks for the opportunity of doing this survey; it has not only proved a most interesting experience, but has more than realised my anticipations in restoring my health.

I have, &c.,

H. D. M. HASZARD,
District Surveyor.

The Surveyor-General, Wellington.