

With regard to the language and dialects. This study was attended with great difficulty because there was at hand no go-between who could play the part of a mutual interpreter, for the terms which were required could only be learnt either by pointing to the corresponding object, or through such signs as would be employed in barter. These two methods were, however, the source of many misunderstandings and mistakes, for the same object was variously named by different people, and for weeks Maclay was uncertain as to which term was the correct one. Here is an instance of what frequently happened. Dr. Maclay showed a leaf, hoping to arrive at its name, a native mentioned a name, which was forthwith written down; another Papuan gave another name on being shown the same thing; a third, fourth, and fifth, each gave a different word. Which out of all these was the proper name of the leaf in question?

After a time and by degrees it was discovered that the word first mentioned was the proper name of the plant to which the leaf belonged, the second betokened its colour, *e.g.*, *green*, the third *dirt* or *useless*, probably because the leaf had been picked up from the ground, or belonged to a tree not turned to account by the Papuans. And so it came to pass with many words with abstract expressions and such as could not be explained by signs. Maclay, too, had obviously greater difficulties, for instance, how to inquire the equivalent word for "friend," and that for "friendship," and it was only after the lapse of four months that the corresponding word to "seeing" was arrived at, but as to the equivalent of "hearing," this was never come upon. The writing down of words was involved in further difficulties; there were certain tones of the Papuan language which were absolutely impossible to imitate. This Maclay rightly attributes to fundamental differences in the anatomical structure of the larynx and the whole muscular system of the organ of speech in the two races. Not only the organ of speech but also that of hearing plays an important part, for the same word may be heard in a totally distinct manner by different individuals. There is, too, in the denotation of the words of such a tongue quite a series of sources of fallacy—(1) the aborigines have not the same pronunciation; (2) the translator hears the words with his individual organ of hearing; (3) previously to writing it down he pronounces it with his individual organ of speech; (4) and finally, after pronunciation, the foreign word must be expressed in the characters of a known language. Nearly every village on Maclay Coast has its peculiar dialect, and these vary so much, that when making an excursion of two or three days, M. Maclay required the assistance of two, and even three, interpreters. It is only the old who understand two or three dialects, and it not infrequently happens that young persons do not know words of their own dialect, in which case they resort for information to some old Papuan. From this it may come to pass that upon the death of elders new words must be brought out by the young and introduced into the vocabulary. On the other hand the Papuans are fairly quick at learning a new language, consequently there are now to be heard on Maclay Coast a number of Russian equivalents for such words as axe, knife, nail, &c. The names of various birds are founded upon the cry which they utter. There are, moreover, among the dialects of Maclay Coast a number of Malayo-Polynesian words.

J. C. GALTON

(To be continued.)

JAMES R. NAPIER, F.R.S.

MANY cultivators of science, both at home and abroad, more especially those engaged in engineering and shipbuilding, will deeply regret to learn of the decease of Mr. James R. Napier, F.R.S., the eldest son of the late Mr. Robert Napier of Shandon, the eminent pioneer of the shipbuilding and marine engineering industries of the Clyde. The sad event occurred on Saturday, the

13th ult., at his house in Glasgow, after an illness which had confined him to his room for about three weeks. His health had been very unsatisfactory, however, for a number of years, and, with the view in a great measure of securing a better bodily condition, he had travelled a good deal—to Australia, twice to America, several times up the Mediterranean, wintering once at Malta, and on another occasion at Madeira, where he had the melancholy satisfaction of having as a brother invalid the late Prof. W. K. Clifford.

Born in the year 1821, and educated at the High School of Glasgow, Mr. Napier studied mathematics under Dr. James Thomson (Sir William Thomson's father), natural philosophy under Dr. W. Meikleham (Sir William's immediate predecessor), and practical astronomy under the late Prof. J. P. Nichol.

When quite a young man he was installed in his father's shipbuilding yard at Govan in a responsible position, having had, however, an excellent practical training in the workshop under the late David Elder, a man who did much to train the present race of mechanics who have since secured prominent positions in their profession. By and by the firm of Robert Napier and Sons was constituted, the sons being the deceased and his brother John; and the firm eventually attained a position in connection with marine engineering and naval architecture that has never been excelled in the annals of steam navigation. About twenty years ago Mr. James R. Napier retired from the firm, and for a time he conducted a shipbuilding business of his own, when he availed himself of the opportunity of putting into practice a number of his most advanced notions in ship construction. But it would seem as if he was not destined to shine as a man of business, being very unlike his father in this respect. During his subsequent career he occasionally executed a number of commissions in connection with matters in which his special knowledge could be profitably turned to account, and much of his time was devoted to scientific pursuits.

From time to time Mr. Napier communicated many interesting papers to learned societies with which he became connected. One of those bodies was the Philosophical Society of Glasgow, which he joined in the year 1850, when its presidential chair was filled by Dr. Thomas Thomson, F.R.S., the eminent chemist and mineralogist. In 1855 he became a life member of the British Association, on the occasion of its second meeting in Glasgow, and he long took a deep interest in its affairs, by serving on special committees, and otherwise. He was one of the founders, and subsequently president, of the Institution of Engineers in Scotland (now Institution of Engineers and Shipbuilders), the birth of which took place in 1857, with Prof. Rankine as the first president. When the Institution of Naval Architects was formed in the year 1860, he became a member, and was honoured by a seat in its first council.

Following the example of Prof. Roscoe in Manchester, a number of people of scientific proclivities, a few years ago, originated the Glasgow Science Lectures Association, the first lecture of which was, appropriately, delivered by Roscoe himself. The movement in Glasgow met with very hearty co-operation from the deceased. His sympathy with scientific progress was shown in a great variety of ways; and as an inventor who had often to apply to the Patent Office, he was leagued with Sir William Thomson and others in the recent movements for bringing about a comprehensive reform of the patent laws.

One of the leading features of Mr. Napier's career was the unbroken intercourse, personal and professional, which was maintained between him and Prof. Rankine. They had numerous joint undertakings in experimental investigation, and each was of very great service to his fellow, and in the end to science. As might well be understood, to no person was Rankine's too early decease a greater loss than to James R. Napier. JOHN MAYER