

THE GUTHRIE MEMORIAL FUND

A COMMITTEE has been formed, under the presidency of Prof. Huxley, to raise a memorial fund in honour of the late Prof. Guthrie, F.R.S. Prof. Guthrie endeared himself to a large circle of friends by his simple character and wide sympathies. Unfortunately, as his time was exclusively devoted to teaching and to scientific research, the provision for his family is far from adequate. A slender income is furnished for his widow by a policy of insurance settled upon herself, but this will not enable her to provide for the education and maintenance of her step-children. The ages of the children dependent upon her are twelve, fourteen, and seventeen years respectively, and their case is the more sad because, until a late period of his life, Dr. Guthrie had every reason to be satisfied that they were sufficiently provided for.

Under these circumstances it will be felt by all who value his memory, as well as by those who only knew him through his scientific labours, that any sum which is gathered as a memorial of his life must necessarily be devoted to placing his children as nearly as may be possible in the position they would have occupied but for his untimely death.

Subscriptions may be sent to the Honorary Treasurer, Major Macgregor, R.E., Science Schools, South Kensington Museum, London, S.W.; or to the Honorary Secretary of the fund, Mr. C. Vernon Boys, at the same address. Cheques to be crossed "Messrs. Cox and Co."

In addition to the gentlemen named above, the Executive Committee consists of Capt. Abney, Prof. W. G. Adams, Prof. Roberts-Austen, Walter Besant, Prof. G. Carey Foster, Dr. J. H. Gladstone, W. J. Harrison, J. Power Hicks, Prof. J. W. Judd, Prof. A. W. Reinold, and Prof. Balfour Stewart; besides whom there is a General Committee, comprising Prof. W. E. Ayrton, Shelford Bidwell, Walter Bailey, T. Lauder Brunton, W. H. M. Christie, Prof. Clifton, Conrad Cooke, Prof. Crookes, Warren De La Rue, Prof. Dewar, Colonel Donnelly, General Festing, Prof. G. Forbes, Prof. Fuller, R. T. Glazebrook, Prof. Goodeve, Dr. Hopkinson, J. Norman Lockyer, Sir John Lubbock, Bart., Prof. MacLeod, Prof. J. Perry, Prof. Poynting, Prof. Rücker, Dr. W. J. Russell, Prof. W. A. Tilden, Prof. S. P. Thompson, Prof. Thorpe, and Dr. Alder Wright.

It is satisfactory to hear that already a considerable number of subscriptions have been received, but it is hoped that when the necessity for the existence of such a fund shall become better known there may be a large increase in the number.

VOLCANIC ERUPTION IN NIUA-FU,
FRIENDLY ISLANDS

SIR J. H. LEFROY has forwarded to me a small packet of volcanic dust, together with an extract from a letter written by Mr. Coutts Trotter, F.R.G.S., and has requested me to examine the former and append my remarks upon it to the more important parts of Mr. Trotter's letter. This document is dated on September 24, 1886, "on board the ss. *Sava*, a few miles south of the Island of Niua-foo" (or Niua-fu, one of the Friendly Islands). After speaking of an expedition to Fiji, Mr. Trotter proceeds:—

"Meanwhile I got into a little steamer to visit the windward island of the group, and was persuaded to come on in her to Tonga. There I found that news had just come of an awful volcanic eruption in the Island of Niua-foo above mentioned, and my steamer was chartered to go and make inquiries and give relief. . . . We started at once, and arrived off the island before dark yesterday. No trace of fire or smoke, and I was much chaffed for my 'disappointment.' But on landing this morning we found the damage done was substantial enough, an erup-

tion of dust and stones and water having gone on for eighteen days, and two-thirds of the island smothered or greatly injured. The island is some forty or fifty miles round, all volcanic, no beach anywhere, and landing difficult, and a lake of brackish-bitter water occupying perhaps a fourth or more of its extent. There are at all events three small islands in the lake, one with a lake in its centre. I suspect this lake is the remains of the crater and eruption to which the existence of the island is due, later eruptions being cause for the small island craters. The present eruption began apparently near one end of the lake. I saw three or four craters there—one covered with a green sulphurous scum; and another, just beyond it, which I could not in the time I had actually visit, very deep, and full (a friend tells me) of mud and water. Near it is a little rounded mountain of 'earth,' some 200 feet high, formed by the present eruption, and projecting far into the lake; at the other end of the lake is a fresh accumulation, as I was told, of pumice, but it looked to me from where I stood more like an accumulation of black sand. The whole island has been in a disturbed state for some three months and a half, the dates of the principal disturbances coinciding remarkably with those which are going on in other parts of the world—earthquakes on June 8 and 11, which I think are the dates of the first New Zealand outbreaks,¹ again on August 12, ditto. This of course is not wonderful, but the final catastrophe here took place on August 31, which we understand was the exact date of the recent American earthquake.² It was preceded for twenty-four hours by earthquakes, . . . and went on for ten days, I am told, without intermission, then two days quiet interval, then going on again for nearly a week—terrific thunder and lightning for twenty-four hours incessantly. The column of steam rose, they say, several thousand feet, anyhow immensely higher than a hill 7600 feet high, which I ascended, and whence I had a bird's-eye view of the lake and crater. Showers of stone accompanied it; these fortunately fell straight, or nearly straight, back. They were red-hot, with masses of dust attached, and as they fell left the dust behind, which produced the effect of a fiery tail. The great mischief was done by the dust, which, as the wind shifted, carried destruction in every direction. In one village which I entered, the shower only lasted an hour and a half, but the ground was deeply covered, the blades of grass even now only beginning to peep through, and every coco-palm ruined for the present, the branches hanging withered and almost perpendicular, and the young central shoot sticking out by itself. If they get rain, the trees will recover and bear again in three years, but otherwise are likely to die. But in other districts the houses are buried, and along the coast large extents of forest, scrub, or bush, and, what is more immediately serious, the yam beds. They have just been planted, and any that were above ground will be killed, even if the latest planted may push through and flourish. Wonderful to say, no one was killed, although many very old people have died since from fear and exhaustion. They all betook themselves to the upper parts of the island for safety, and perhaps with reason, for the last two volcanic outbursts both took place on the coast-country near the shore. These (respectively nineteen and forty years ago) were both lava eruptions. I saw the craters and the lava-streams from them down to the sea on the west coast as we steamed along to-day; the lava of the earliest being hardly invaded yet by vegetation—not a blade of green on the later, which runs far out into the sea, like the rough substratum for a big embankment or breakwater. According to native tradition, the last eruption of a kind similar to the present took place from very nearly the same spot in the lake seventy-two years ago, the old people having childish recollections yet. The

¹ The first outbreak was early on the morning of June 10. See NATURE, vol. xxxiv p. 301.

² The principal shock was on Tuesday night, August 31. See NATURE, vol. xxxiv. p. 470, and vol. xxxv. p. 31.