

touched. The Lenguas, being strong believers in reincarnation, are convinced that the soul of a deceased person hovers about his old haunts, watching for the opportunity of slipping into some living person. Such a chance is provided when a man dreams, because then his soul is wandering, and these people suffer terribly from dreams, so much, indeed, that it may be questioned whether a more rational diet, or medical relief from indigestion, would not have at least accelerated the painfully slow process of religious conversion. This reincarnation doctrine leads to such ludicrous mental conditions that a man in full vigour may be in doubt whether he is himself or not, asserting gravely that his own real soul is at a distance, being kept away by devils, and that some other, departed, soul has crept into him!

Owing to the custom of infanticide, especially of girls, the men are in the great majority, with the result that every girl has a wide selection of partners.



FIG. 2.—Blanket Weaving. From "An Unknown People in an Unknown Land."

Further, native law requires that the man must leave his own people and join those of his wife. Her main object in life being to feed well and to have as little drudgery as possible, she seeks a mate of a mild disposition, who will be subservient to her rule, besides being a good hunter and gardener. There is a delightful chapter on the baneful result of communalism, socialist principles being carried to such perfection that the lazy bodies will neither hunt nor fish as long as there is something to eat elsewhere, because it is a strict law that all shall share in everybody else's spoil.

The author's profits of this remarkable and well-illustrated book will be devoted to the support of the Church of England South American Missionary Society.

PROF. M. H. N. STORY MASKELYNE, F.R.S.

PROF. MERVYN HERBERT NEVIL STORY MASKELYNE, whose death on May 20 was announced in last week's NATURE, was born on September 3, 1823, and was the son of Anthony Mervyn Story, F.R.S., who married the only daughter of Nevil Maskelyne, the famous Astronomer Royal. The family is thus one of scientific distinction through three generations, and it is not surprising that Maskelyne was early in life attracted to the study of science.

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He went to Wadham College, Oxford, where he took his degree in 1845, and even in those early days all his spare time, energy, and resources were devoted to the pursuit of chemistry, at a time when there were very limited facilities for the study of science at the university.

In 1856 Maskelyne succeeded Buckland, and became professor of mineralogy, and held that office until the year 1895. He had a laboratory and residence under the Old Ashmolean Buildings, and was one of the chief workers in experimental chemistry in Oxford. He was indeed urged by many persons to be a candidate for the chair of chemistry, which became vacant in 1855, but was not willing to stand in opposition to his friend, Benjamin Brodie. He played a prominent part in the establishment of science teaching in Oxford, and was secretary of the first committee formed to promote the scheme for building a university museum. Some of his reminiscences of that period are related in Dr. Vernon's "History of the Oxford Museum," where it is stated that his classes in analytical chemistry were attended, amongst others, by Thomson, afterwards Archbishop of York, and Henry Smith.

In 1857 he became keeper of the department of minerals in the British Museum, and for twenty-three years combined this office with his Oxford professorship. The keepership of the mineral department he resigned in 1880, when he became Liberal member of Parliament for Cricklade, and afterwards for North Wilts, until the year 1892, when he retired from active political life. Referring to his father's death, he wrote, "it was like a whirlwind that bore me from the museum, where my life would have been impossible, to this country life and into the House of Commons."

Maskelyne's scientific activity was for the greater part of his life in the field of mineralogy, and especially crystallography, and his interests were largely centred in the development of the great collection of minerals at the British Museum. In particular, he brought together the wonderful collection of meteorites which for years has maintained its position as the best, or one of the two best, collections in the world. Much of his time was devoted to the scientific study of these remarkable objects. In 1850 Mr. Sorby had laid the foundation of the modern study of rocks by showing that it was possible to grind sections of them so thin as to be transparent, and Maskelyne was the first to apply the new method to the study of meteorites, and was able by the microscope to identify in them many terrestrial minerals and to discover some which are unknown on earth.

Although in the study of higher physics and mathematics he must have been mainly self-taught, it was towards the physical and crystallographical sides of mineralogy that he was particularly attracted. Mineralogy had become an exact science in the hands of Haüy at the close of the eighteenth century, and Whewell and his eminent successor Miller kept alive in Cambridge the mathematical treatment of crystallography.

It was Maskelyne's work to develop in particular the subject of the symmetry of crystals, upon which he gave a course of lectures before the Chemical Society in the year 1875. Victor von Lang, who subsequently became professor of physics at Vienna, had



been his assistant in the British Museum for a short period (1862-4), and his suggestive book, published in 1866, was one of the first dealing with this subject; much that appeared in the books of both authors was doubtless the result of their discussions during this period.

Maskelyne's own "Treatise on the Morphology of Crystals" did not appear until 1895, the year in which he resigned his professorship in Oxford, but much of it had been written thirty years before, and, if it had been published at that time, the book would have been regarded as a highly original treatise. The proof sheets were familiar to many of his students, and introduced them to a very attractive treatment of what was then a new subject. Owing to the late appearance of this book, his methods were chiefly made known to the world in an indirect way through his pupils, and it is possible that he may not have received the credit that is due to him. For example, it is mentioned in Lewis's "Crystallography" that the mathematical establishment of the angles possible between planes of symmetry in a crystal was first given by Maskelyne in his lectures in 1869, but no publication of such a result was made until that by Prof. Gadolin in 1871.

Among those who worked with him at the British Museum, in addition to his old friend von Lang, were Thomas Davies (1862-80), who was responsible under him for the arrangement of the "Collections"; Dr. Walter Flight, F.R.S. (1867-80); W. J. Lewis (1875-7), now professor at Cambridge; and his successor, Lazarus Fletcher (1878-80), now director of the Natural History Museum. He always spoke with particular admiration of Graulich, of Vienna, who was an early and intimate acquaintance. One of his dearest friends was that remarkable man, Henry Smith, of Oxford, with whom he frequently discussed mathematical problems. It was the good fortune of the present writer, when an undergraduate, to receive instruction from Maskelyne in an informal way in Henry Smith's house; on these occasions the lecture was delivered from an armchair in the drawing-room, Smith himself playing the part of a second student, and illuminating the discourse by questions and comments of profound significance. An example of the stimulus which Maskelyne's active mind gave to those with whom he came in contact is the investigation by Smith of the conditions under which lines in a crystal can be perpendicular to each other.

It is not necessary here to give a detailed account of Maskelyne's scientific papers. They range over a wide field, and are characterised by a charm of literary style which is well known to all who received letters from him. His activities date from so early a period that it is difficult now to ascertain what personal part he played in some of the scientific discoveries of the middle of the nineteenth century, but he worked for a time in Faraday's laboratory at the Royal Institution, was one of the earliest to take a practical interest in the newly invented process of photography, and, indeed, throughout his long life interested himself in almost every branch of scientific inquiry.

Faraday stayed with him during the British Association meeting at Oxford in 1847, when, he writes:—"I showed Faraday for the first time the making and developing of a photo of the College Quad from the window. His joy was that of a boy."

Maskelyne's interests outside science were also very wide, and he was the owner of one of the best and most carefully selected private collections of antique engraved gems; his catalogue of the Marlborough gems, which was privately printed, is well known.

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He possessed a remarkable elasticity and alertness of mind, as of body, even in advanced years, and his enthusiasm for all that was new in science, literature, and art was maintained to the end. Only four years before his death he was occupied on a scientific handbook for the use of the dairy farmers of Wiltshire, and was well known throughout the county as a man whose intellectual activities were always available for a good cause. Everything that he did was evidence of his taste, and was marked by a conspicuous refinement and distinction of style and manner.

In a letter written only three years ago he said:—"I think there must be some cement in the smaller sciences like mineralogy and crystallography that links their students by a bond unlike the relations that exist between the advocates of the larger sciences; jealousies and rivalries seem to hold aloof, and certainly from the days of Graulich and Lang to those of my old age some of my dearest and most honoured friends have come to me through the sciences that you and I have professed at Oxford since 1856."

It was in reality his own warm, impulsive, quick-tempered, and sympathetic nature which united him by the closest ties of affection to so many of his pupils and scientific friends. The charm of his manner and the astonishing versatility of his mind were the qualities that most impressed those who met him in the later years of his life.

He received the honorary degree of Doctor of Science at Oxford in 1903, and the Wollaston Gold Medal from the Geological Society in 1893. He was an honorary fellow of Wadham College, and a corresponding member of several foreign societies. In 1858 he married a daughter of Mr. J. D. Llewelyn, F.R.S.; she survives him, together with three daughters, one of whom married the late Mr. H. O. Arnold-Forster, and another Sir Arthur Rücker. H. A. M.

#### MRS. W. P. FLEMING.

BY the death of Mrs. Williamina Paton Fleming, astronomy has suffered an almost irreparable loss. Concerning the general spectral classification of stars Mrs. Fleming had accumulated a store of knowledge which was second to none.

Born at Dundee, Scotland, in 1857, she became an assistant at the Harvard College Observatory, Cambridge, Mass., in 1879, and in 1898 was officially appointed as the curator of astronomical photographs, a department wherein Harvard holds a unique position. Here Mrs. Fleming was charged with the supervision of a number of ladies whose duty it is to examine minutely, and to classify, the ever-growing library of plates taken at the Cambridge and Arequipa stations. Her special personal labours were chiefly devoted to the study of the enormous number of stellar-spectra plates which form the Draper Memorial. This collection was commenced in 1886 as a memorial to the late Dr. Henry Draper, and consists of an immense number of photographs of stellar spectra taken with the 8-inch and 11-inch Draper telescopes. Each plate covers a comparatively large area, and contains the spectra of a large number of stars, and when we learn, from Prof. Pickering's latest report, that there are now 18,182 plates taken with the 11-inch, and 36,852 taken with the 8-inch telescope, it is easy to understand that Mrs. Fleming's task was no light one.

The chief result of these studies was, perhaps, the production, in 1890, of the "Draper Catalogue of Stellar Spectra," in which Mrs. Fleming classified the spectra of 10,351 stars down to about the eighth magnitude. This Durchmusterung, with its revision,