

troubles came just as my new laboratory was being started. It has taken a great amount of time and energy, but energy well spent, and the work is done. . . . It is a great delight now to work in my new building where the surroundings are most attractive and everything can be kept clean and neat.' Then after a description of the work on which he was engaged—'I have other things also on hand or in my mind, but I cannot put out work as fast as I formerly did. During hours allowed for study I prefer to work rather than read. I am not complaining; I am so much better than I ever expected to be three years ago.'

He died on August 12, 1906.

In January 1897 he had married Miss Grace Chapman of Albany, New York, who survives him.

None who knew Penfield could fail to be impressed by the earnestness, simplicity, and sincerity of his character: in scientific and intellectual matters he was inspired by a boyish enthusiasm and the keenest enjoyment of life and of the work and occupation of an active student and teacher. He endeared himself to colleagues and pupils alike, and made many warm and enduring friendships in Europe and America. Those who were privileged to enjoy his society when he visited Europe in 1894 and 1897, or to see him among his colleagues in their bachelor quarters at the Sheffield Scientific School, or later in the enjoyment of a happy married life in his own peaceful home, carried away the recollection of a sweet and affectionate nature, and feel that by his death they have lost one of the most warm-hearted and sincere of friends.

H. A. M.

ROBERT PHILIPS GREG (1826-1906).

(With a Portrait, Plate VII.)

Born at Manchester on March 23, 1826, Robert Philips Greg passed away at his residence, Coles Park, near Buntingford, Hertfordshire, on August 20, 1906, in the 81st year of his age. His death has removed one who took a prominent part in the formation of the Mineralogical Society and who for the first ten years of its existence held the important office of Treasurer. He was compelled to relinquish this office in November 1885 by the continuance of the severe, and all but fatal illness which befell him in the summer of that year, and, as his health in the following year still remained precarious, he finally severed his connexion with the Society.

Among those who have assisted in the development of the mighty

industry which centres at Manchester, the Greg family hold an honoured place. One of the best known of its members was Robert Hyde Greg (1795–1875). A man of exceptional capacity and gifted with more than ordinary business acumen, he had a prosperous commercial career, and the high position he held among the merchants of Manchester was recognized by his election in 1844 to the presidency of the Chamber of Commerce. Despite the engrossing claims of his widely-ramifying business, he took keen interest in public affairs and still found leisure for antiquarian and scientific pursuits. He played a leading part in the agitation in favour of Parliamentary Reform and the Repeal of the Corn Laws, and his fellow-citizens testified to the esteem in which they held him by electing him in 1839 as their representative in Parliament, without his previous knowledge and even against his will, at a time when he was enjoying a brief holiday in Switzerland. He had sufficient appreciation of minerals to expend in 1835 the sum of £1,300 on the purchase of the fine collection which had been formed by Thomas Allan (1777–1833), F.R.S., a well-known banker in Edinburgh; but his knowledge of mineralogy was slight and he made no additions to the collection. He married in 1824 Mary (1799–1878), the daughter of Robert Philips, a prominent Manchester merchant, and had by her a family of four sons and two daughters. Their eldest child was Robert Philips Greg.

At the time of young Greg's birth the old order of things was on the eve of change, but had not entirely vanished: in Manchester, merchants still lived on the spot where their working hours were spent, and his parents were occupying a house in King Street actually adjoining his father's business premises in Chancery Lane. Two years later they moved to Ardwick, then in the country, but now an ugly suburb dominated by factory chimneys and penetrated by railway viaducts, and eventually at the end of 1831 they settled down at Norcliffe Hall, close to the Quarry Bank Mill, which has belonged to the Greg family since 1788. Norcliffe Hall is pleasantly situated near Wilmslow in Cheshire, and about ten miles from Manchester. Here Greg spent most of his boyhood. He received his early education from the Rev. John Colston, of Styal, thenceforth a lifelong friend; in 1840 he was sent to Mr. Malleeson's School, Hove, Brighton, where he remained two years; and after spending a single session at the Manchester New College he proceeded in 1843 to Edinburgh University. At the age of nineteen he commenced his business training, and on his coming of age in 1847 he was taken into partnership by his father. He seems never

to have been completely absorbed in commercial affairs, and had certainly considerable leisure and opportunity for following up the many intellectual pursuits in which he was keenly interested. In 1857 he married Louisa Russell (1834–99), daughter of Samuel Stillman Gair, of Liverpool; they had no issue. They made their home first at Outwood Lodge, near Prestwich, and subsequently, in 1871, moved to Coles Park, which has been the property of the Greg family for upwards of 120 years. The house is charmingly placed amid sylvan surroundings, the natural beauties of which Greg did so much to enhance, and its approach recalls on a smaller and softened scale the features of a Derbyshire dale. Here they lived the remainder of their lives, and Greg engaged in the varied duties and occupations of a country gentleman. In 1873 he was appointed Justice of the Peace for the County, and in 1897 he succeeded to the Chairmanship of the Buntingford Bench. He enjoyed good health until his critical illness in 1885; he was affected by some form of blood-poisoning and had to suffer the amputation of his right foot, an operation which owing to the subsequent gangrening of the wound nearly cost him his life. Convalescence was tedious and slow, and two years elapsed before he recovered such measure of activity as an artificial substitute for his lost foot would allow. In 1895 his wife was attacked by the epidemic of influenza prevalent at that time, from which she never wholly recovered and to the after-effects of which she succumbed four years later. After her death Greg led a very quiet life; indeed, his own impaired health and the increasing weight of years would have in any case resulted in comparative seclusion. His death, though sudden, was not entirely unexpected. He was buried on August 23 at Westmill, of which village he was the squire, and the funeral was attended by a large number of relatives and others wishing to pay to him a last token of respect.

Until the time of his critical illness, Greg was an ardent collector; full of enthusiasm, he would spare no effort and grudge no expense to secure a coveted specimen. He began with spiders as a boy. On reaching manhood he turned his attention to the 'Allan' collection of minerals, then in his father's possession at Norcliffe Hall, and expended some £800 in the purchase of desirable specimens. Thanks to his energy, the collection became by far the finest private collection of minerals of the time in this country. The acquisition of specimens by purchase or exchange brought him into relations with collectors and others interested in minerals. In this way he made the acquaintance of W. G. Lettsom (d. 1887), like himself a keen collector, with whom he

collaborated in the production of the 'Manual of the Mineralogy of Great Britain and Ireland', which though published in 1858—nearly half a century ago—still remains the only work dealing with the general distribution of minerals in the British Isles. The book was written in four years, a remarkably short space of time for a work of that kind. With its publication Greg's interest in minerals seems to have waned, and in 1860, two years after its publication, he negotiated on behalf of his father the sale of the collection to the Trustees of the British Museum. He published a few papers on mineralogical subjects, the most important of which are the description of a new oxychloride of lead, matlockite, the discussions of the crystalline forms of leucophane and of rhodonite, and a paper with the late Professor Heddle on British pectolites. During the succeeding eighteen years he devoted much attention to the study of meteorites and meteor-showers, mainly from the astronomical point of view. He was a member of the Committee appointed by the British Association to report on observations of luminous meteors, and he wrote a large number of papers bearing on this subject, which form an enduring contribution to science. He got together a small collection of meteorites which was sold in 1865 to the Trustees of the Calcutta Museum for £500, and commenced in 1875 the formation of a collection of prehistoric implements which he sold in 1889 for £304. In consequence doubtless of the lengthy visit which he and his wife together with a party of relations paid to Egypt and the East in 1880, he commenced, three years later, a book on the comparative philology of the old and new worlds; it, however, did not actually appear till 1893, owing to the intervention of the severe illness already alluded to.

Besides being a member of the Mineralogical Society (1876–86), Greg belonged to the Royal Astronomical Society (1868–81), the Society of Antiquaries (1878–94), and the Geological Society (1853 till his death), and he frequently attended the meetings of the British Association. According to the Royal Society's Catalogue of Scientific Papers, Greg published twenty-six papers, and was joint author of two others, in addition to the two books mentioned above.

G. F. H. S.

JOHN GEORGE GOODCHILD (1844–1906).

Mr. J. G. Goodchild, who died at Edinburgh on February 21, 1906, was an officer of the Geological Survey, to which he became attached in 1867. He was born near London on May 26, 1844. For many years



ROBERT PHILIPS GREG.
(At the age of 79.)