

CHARLES WATKINS MERRIFIELD, F.R.S.

MR. CHARLES WATKINS MERRIFIELD, F.R.S., who died at Hove on the 1st inst., at the comparatively early age of fifty-six, was a native of Brighton. Having entered for the Bar, he in 1847 received from the then Marquis of Lansdowne an appointment in the Education Department of the Privy Council Office. Though called to the Bar in due course, he never practised, but was speedily promoted to the office of an Examiner, the duties of which he discharged with marked attention and success, while finding time for other work which made for him a name among men of science. Though well versed in Greek and Latin, as well as in the classic authors in French and Italian, both of which languages he wrote well and spoke fluently, the bent of his mind was decidedly towards the more exact sciences. He was an early member of the Royal Institute of Naval Architects, of which he was for many years Honorary Secretary, receiving a handsome testimonial on his retirement in 1875. Some mathematical papers he had contributed to the *Transactions* of some of the learned societies, and especially some memoirs on the calculation of elliptic integrals in the *Philosophical Transactions*, led to his election as a Fellow of the Royal Society in 1863. In 1867 the Government established the Royal School of Naval Architecture and Marine Engineering at South Kensington, and Mr. C. W. Merrifield, at the request of the authorities, accepted the office of Vice-Principal. He only intended to take this as a temporary measure, but as the result of the lamented death of Mr. Purkiss, who was to have been Principal, Mr. Merrifield was appointed to that office. On the transfer of the Institution to Greenwich in 1873, he resumed his office of Examiner in the Education Department. Mr. Merrifield was a frequent attendant at the annual meetings of the British Association, and filled the office of Vice-President of its Section of Mechanical Science at the Brighton meeting in 1875, and was President of the same Section at the Glasgow meeting in the following year. He served on many important committees of that Association; one of these was the committee whose report on the stability, propulsion, and seagoing qualities of ships in 1869 was drawn up by him, and another was the committee for reporting on Babbage's celebrated analytical machine. Mr. Merrifield was a member, and in due course became President, of the London Mathematical Society, and he held the office of Treasurer until he was compelled by his health to resign it in 1882. To some of the leading scientific journals and periodical publications his contributions, extending from 1853, have been very numerous; they may be found in the publications of the Royal Society, the *Philosophical Magazine*, the *Assurance Magazine*, the *Messenger of Mathematics*, &c. His acquaintance with mathematical arithmetic, methods of interpolation, and tabular work in general, was very wide and complete. Mr. Merrifield edited many of the works in the Text-books of Science published by Messrs. Longman, and himself wrote a successful treatise on arithmetic and mensuration as one of that series. Some of his papers on the difficult and scientifically interesting subject of sea waves were translated into Italian for the *Rivista Marittima*, in which they appear, and a footnote to one of them, after bearing testimony to the author's extensive knowledge and excellence of style, expresses the satisfaction of the editor at his adding to these qualifications that of "writing correctly our language." He was closely connected with the Association for the Improvement of Geometrical Teaching from its foundation, and took an active and leading part in the work of the Association. Mr. Merrifield served on several important Royal Commissions, including one on the seaworthiness of ships, of which the Duke of Edinburgh was President. During the last few years he frequently sat as scientific assessor to Mr. Rothery in the Wreck Court. A part of

his unofficial work consisted of the conduct for many years of the mathematical part of the May examinations of the Science and Art Department. All his arrangements for this purpose were completed in 1882, when, in April of that year, he was prostrated by an attack of apoplexy. He had so far recovered as to give hopes that his life might be spared for some years, but on October 18 last he was seized with a third attack, from which he never rallied.

GEOLOGICAL SURVEY OF PRUSSIA

THE Report of this important Survey for 1882 has just been issued as a well-printed octavo volume with maps, sections, and plates of fossils. The first division is devoted to an account of the operations of the Survey in the field. These were conducted in the Harz, where the keen-eyed Lossen still wields his powerful hammer among the eruptive rocks of that classic region; where, also, Dr. von Groddeck and Herren Halfar, Dames, Branco, and von Koenen bore a share; in northern and eastern Thuringia and the Thuringerwald, where ten geologists were engaged; in Hesse-Nassau, with a force of five surveyors; in the southern part of the Rhine province, where Herr Grebe was at work; in Silesia, where the Survey was commenced by Dr. Dathe; in the Berlin district, where the superficial deposits and agricultural features were mapped, and the special geological and agricultural map of that district, consisting of thirty-six sheets, was completely surveyed; in the low grounds about Stendal and Gardelegen, in the plain of the Lower Elbe, and further east in West and East Prussia; and lastly among the diluvial and alluvial formations to the north-west of Halle.

In the course of the year eighteen sheets of maps and sections were published, including fourteen of the geological-agricultural survey of the Berlin district and four sheets of the map of older formations. The total number of sheets now published amounts to 109. There were likewise issued in 1882, besides the Annual Report, three parts of the *Transactions* of the Survey: viz. an account of the Coal-basin of Lower Silesia and Bohemia, by A. Schütze; descriptions of the Regular Echinids of the North German Chalk, by C. Schliüter; and a monograph of the species of *Homalonotus* in the Lower Devonian rocks of the Rhine, by C. Koch.

The plan of operations for 1883 included further surveys in the Harz, Thuringia, and the Thuringerwald, Hesse-Nassau, Rhine province, Silesia, and the great lowlands of Prussia.

The most important feature of the Annual Reports of the Prussian Geological Survey is the series of papers by members of the staff and others, with illustrative coloured maps and sections. Of these papers no fewer than twenty-two are published in the Report for 1882, including four by geologists not attached to the staff, and amounting in all to nearly 700 pages, with 23 plates of maps, sections, and fossils. Among these the following important communications may be cited:—"The Kulm of the Upper Harz," and "The Kersantite Dyke of the Upper Harz," by A. von Groddeck; "The Fauna of the Taunus Quartzite of the Rhine," by E. Kayser; "Preglacial Freshwater Formations in the Diluvium of North Germany," by K. Keilhack; "The Variolite-bearing Kulm Conglomerate of Hausdorf in Silesia," by E. Dathe; "New Borings in East and West Prussia," by G. Berendt and A. Jentzsch; "The Lower Devonian Rocks of the Siegerland and their Associated Veins," by H. Schmeisser; "The Trough of Eifel Limestone of Hillesheim," by E. Schulz.

NOTES

PROFESSOR SYLVESTER has been elected a Foreign Member of the Royal Academy of Sciences of Göttingen, of which he