

SIR CHARLES NEWTON, K.C.B.

THE hand of death has lately fallen heavily on the ranks of the older scholars; and classical archæology has especial losses to record. Only a few months back, there passed away Heinrich Brunn, the *doyen* and most picturesque representative of German Hellenism; and we in England have now sustained a loss no less severe. Though Newton had of late years become too infirm for active work, and had in fact done little since his retirement in 1885, it is now, when he has gone from among us, that his loss will be most keenly felt. It was not so much in his actual achievements, though these were considerable enough, that his truest claim upon our recollection lay; nor yet in the fact that he had practically opened up a new science for English scholarship; it was more than all in the personality and force of character of the man, which impressed itself on all with whom he came in contact, and the masterful influence which was by no means confined within the limits of his own science. It was to this that he owed his success; and there have been few instances in which a necessity has been so opportunely met by the man most adapted for it. For when Newton joined the Museum in 1840, the study of actual monuments was still in its infancy; Greece itself was very little known, and a pseudo-classicism had been evolved from the mistaken illustration of literary sources with an often inferior Græco-Roman art. Behind him lay the period of learned and ingenious but useless theory; two things were needed to clear away this tangle of ideas—a fuller supply of the best practical material, and a wider scientific method.

At that time the Departments of Antiquities at the Museum, which now are four, were all united in one. The disadvantages which such an arrangement must have entailed are obvious enough, but there was this compensating advantage, that a young man in Newton's position was at the outset enabled to attain a certain familiarity with the wider aspects of his study, and perhaps a breadth of view and sympathy which is more difficult at present. He was thus by his training, as well as by his natural bent, led to a large view of things.

In an address to the Archæological Institute at Oxford, in 1850, he urges a powerful plea for the comparative method in archæology and, as the necessary corollary, for enlargement of museums. In this address, which as archæological teaching was singularly in advance of its times, the writer has laid down the formulæ upon which the modern science of archæology may be said to take its stand. A museum must not be a mere collection of disjointed, disconnected phenomena, but the central consulting-room, as it were, to which all scientific questions may be referred for comparison and elucidation. Classical art and archæology, like all other studies, cannot but lack perspective in isolation: the external conditions, the ethnographical characteristics, the position of the Hellenic race in its relation to the rest of mankind, their art, architecture, life, and thought must be collated and classified with a due regard to the continuity and correlation of things. The archæologist, in short, "must travel, excavate, collect, arrange, delineate, decipher, transcribe, before he can place his whole subject before his mind. But the plodding drudgery which gathers together his materials must not blunt the critical acuteness required for their classification and interpretation: nor should that habitual suspicion which must ever attend the scrutiny and precede the warranty of archæological evidence give too sceptical a bias to his mind." The key-notes here sounded were kept steadily in mind throughout his whole life. It was but a few years after, that his sojourn in the East, as consul at Mytilene, enabled him to put his ideas into practice, and to initiate for England the "era of the spade."

The discovery with which Newton's name will always be inseparably associated is that of the Mausoleum at Budrum, collections from which now fill almost an entire room at the British Museum. Budrum had been visited by Prof. Donaldson early in the century, and the presentation to the Museum, in 1846, of the twelve slabs removed from the castle of the Knights of St. John, had called renewed attention to this monument. In 1847 Newton published a memoir, in which Donaldson's site was selected as that which probably concealed the ruins—a conjecture which other travellers contemptuously rejected. It was not till 1857 that Newton was enabled to verify his conjecture by actual digging, and the account which he gave of his discovery, in his "Travels and Discoveries in the Levant" (p. 86), is one of the most fascinating episodes in a fascinating book. Even when the site was thus determined beyond all doubt, the difficulties had only begun; the obstacles of Turkish officialism and native greed were enough to have broken the heart of a less indomitable energy; but his own untiring efforts, backed by the friendly assistance of Lord Stratford de Redcliffe at Constantinople, brought the undertaking to a well-merited success.

Lord Stratford was only one out of many friends whom Newton succeeded in enlisting in the cause he had at heart; he had pre-eminently the priceless faculty of inspiring others with his own enthusiasm; possessed of considerable social gifts, he was enabled to make many friendships, which served him in good stead both at home and abroad. If a special grant were required, whether for excavating a promising site, or for enriching the Museum with an important collection, he rarely failed to wring a reluctant consent from a Treasury too apt to neglect any cause which is not sufficiently self-assertive. During most of the period of his keepership he was thus able to maintain or to encourage enterprise or exploration abroad, set on foot by men who had caught the infection of his energy in personal contact with himself. Smith and Porcher at Cyrene, Dennis at Benghazi, Pullan at Priene, Salzmänn and Biliotti at Budrum and Rhodes, Wood at Ephesus, and, more recently, Ramsay in Asia Minor, all owed the initiation of their enterprise, or very material support, to Newton at home. Perhaps one of his most solid claims to our gratitude lies in the fact that he was thus instrumental in obtaining no less a sum than £100,000 in special grants for the purchase of collections for the British Museum, over and above the annual sums voted by Parliament. Of these the most important was probably the great Blacas collection in 1867, a transaction which is admirably illustrative of Newton's resourceful self-reliance and power. The French Government (and probably others also) were known to be inclined to treat for the collection, and the English representative had at short notice to determine a sum which should be at once enough to carry the position, and yet not be deemed extravagant. Newton telegraphed on the Friday to Panizzi; next day the trustees of the Museum met, Disraeli came purposely to the meeting, and the historic treasure was ours.

To his energetic guidance the Hellenic Society and the British School at Athens both owe in a large degree their initiation and their present position. It was indeed in such practical initiation, and in the inspiration of others rather than in actual teaching, that Newton's true sphere lay. Yet all who know his writings, and still more those who had the privilege of personal intercourse with him, will acknowledge the debt they owe to his teaching, either direct or indirect. To any one regarding the period over which his activity extended, from a time when archæological science was, as it were, casting its skin, down to the complete transformation of to-day, to any one who knows the masses of now useless literature which form the cast-off slough, it is really astonishing to turn

to Newton's "Essays on Art and Archæology," and to see how fresh and how living the opinions expressed even more than forty years ago still remain. Though cautious sagacity and a conservative temperament were his prevailing characteristics, yet when the occasion needed he could speak with no uncertain voice; it is a remarkable fact, for instance, that his article on the epoch-making discoveries of Schliemann, written at a time when the attitude of scientific men was still undetermined or opposed, remains to-day, so far as it goes, an admirable exposition of the subject. His attitude on such subjects was specially characteristic of his favourite study—Greek epigraphy—for which a man needs a wide range combined with a patient methodical accuracy. He might, indeed, have said of himself, with his great contemporary, Brunne, "In a critical discussion I would rather err methodically than hit upon the truth without method": a golden watchword for this age of hurry and competition.

NOTES.

PROF. RICHTHOFEN has been elected a Correspondent in the Section de Minéralogie of the Paris Academy of Sciences.

DR. D'ARSONVAL has been appointed to the Chair of Medicine in the Collège de France, in succession to the late Prof. Brown-Séquard.

THE death is announced of Dr. Josef Schröter, Professor of Bacteriology in Breslau University, and distinguished for several important researches in the domain of botany. Among the deaths of other foreign scientific men are: M. Stieltjes, the eminent Professor of Pure Mathematics in the Toulouse University; Dr. C. Studiati, Professor of Physiology in the University of Pisa, and Dr. J. G. Brinton, at Philadelphia. Dr. Brinton was known for his botanical works.

PROF. BLAKE has been appointed by the Government of Baroda to the temporary Directorship of the newly-built State Museum at Baroda, and sails this week for India.

MR. J. E. DUERDEN, Demonstrator of Biology at the Royal College of Science, Dublin, has been elected Curator of the Institute of Jamaica.

THE Paris correspondent of the *Lancet* reports that arrangements have been made at the Pasteur Institute for the immediate despatch of tubes of anti-toxic serum to any part of France. It will thus be seen that M. Roux and his assistants have not been idle. Indeed, both the Institute authorities and the public have worked with a will; the latter having, through the *Figaro*, and by means of gifts made directly to the Institute contributed up to December 31, 1894, no less a sum than 611,000 francs (£24,440). This does not include 100,000 francs (£4000) just voted by the Chambers, and which will doubtless become an annual subsidy. The Institute now possesses, for immunising purposes, a stud of 136 horses, a total that will probably be ultimately increased to the maximum of 150. Of these, twenty are kept by the Municipal Council of Paris at a cost of 20,000 francs (£800) a year, for the benefit of the Paris hospitals and poor. At Villeneuve-d'Étang—a property ceded by the State to M. Pasteur in 1886—there are seventy-nine horses cared for by a capable veterinary surgeon and his staff. That the animals flourish under the régime of good feeding and periodical bleedings adopted, is proved by the presence in good health at Allfort of a sturdy Brittany pony which has hitherto supplied no less than 420 litres of blood.

THERE will be a special technical meeting of the Royal Geographical Society, in the Map Room of the Society, on Tuesday, January 22, at 4 p.m., when Prof. A. W. Rücker, F.R.S., will read a paper on "Terrestrial Magnetism."

AN Austrian polar expedition is being organised by Herr Julius von Payer, with the view of securing the artistic repre-

sentation of the physical features of the east coast of Greenland. The actual work will begin in latitude 74°, and will extend beyond latitude 77°. It is anticipated that the expedition will be ready to start in June 1896.

THE weather has continued very disturbed over the British Islands during the past week; northerly gales have occurred with considerable frequency on our northern and western coasts, but the conditions have been quieter than of late over the southern portion of the kingdom. Heavy snow has fallen in Scotland, causing serious interruptions to the railway and telegraphic services; snow has also fallen in many other parts of the country. Sharp frosts have occurred in the Midland districts, as well as in the north and east; and on Tuesday the thermometer in the screen registered 19° at Wick, while ten degrees of frost occurred in several parts of the United Kingdom.

THE study of the "ejected blocks" from a volcano is a peculiarly interesting one, for by the careful piecing together of evidence much may be learnt of the internal processes which accompany the outward and visible eruptions. This study has been undertaken by Prof. Johnston-Lavis for Monte Somma, and some recently published papers contain a portion of the results at which he has arrived (*Transactions Edinburgh Geol. Soc.* vi. 314). Of the many varieties of stratified rocks that have been torn off from the walls of the volcanic chimney by the rising lava, those of Tertiary age show the least metamorphism; while in the deeper-derived Cretaceous limestones all stages of metamorphism are to be found. The earliest changes appear to be the carbonisation of any organic matter to form graphite, and the recrystallisation of the calcite in larger grains. Then as interchange of constituents takes place between the limestone and the metamorphosing lava, various lime-silicates appear in a fairly definite order, until finally we have formed that great variety of minerals for which Monte Somma has long been famous. The occurrence of *periclase* (MgO) is of interest in view of the abundance of hydrochloric acid among the gases emanating from Vesuvius, for that mineral is artificially prepared by heating magnesia in hydrochloric acid gas. Many of the minerals formed under these conditions of metamorphism tend to decompose rapidly under more normal conditions, and associations of serpentine, tremolite, brucite, &c., are formed, such as are well known in areas of regional metamorphism.

THE analogy between these Vesuvian blocks and certain Archæan rock-masses is carried to a striking extent in a further paper, in the authorship of which Dr. J. W. Gregory joins with Prof. Johnston-Lavis (*Trans. Roy. Dublin Soc.*, vol. v. ser. ii. No. vii.). Here many specimens are described which show in the most complete manner the association of characters that led to the belief in the organic nature of the Canadian *Eozoon*. The authors consequently suggest that the Eozoön structure in its typical localities was developed in the limestones by the contact metamorphism of the associated crystalline rocks—a view which, they point out, is in harmony with the conclusions arrived at by Prof. Lawson on purely stratigraphical considerations. The disproof of the organic nature of Eozoon may therefore be considered complete.

THE disease of Anbury, or Finger and Toe, is met with wherever the turnip crop is cultivated, but it is probably nowhere more destructive than in the north of England. An experiment bearing on the disease, briefly described in the *Journal of the Royal Agricultural Society*, by Prof. W. Somerville, will therefore interest all agriculturists. The experimenter emphasises the fact that the disease is extremely infectious, and may be easily induced by inoculating a soil perfectly sound with soil from a diseased field. Such diseased soil, however, may be easily disinfected by lime, a fact which points to the patho-