

or dry, terminate, with one exception, which runs into the Severn. I may add, we have no fresh water deposits in our valleys.

Yours, THOS. C. BROWN.

FURTHER BARTON, CIRENCESTER.

OBITUARY.

JACQUES AMAND EUDES DESLONGCHAMPS was born at Caen, in Normandy, on the 17th of January, 1794. His parents were poor, and imposed upon themselves severe privations in order to afford to their son a liberal education. At the age of eighteen he had so much distinguished himself through his medical studies and examinations, that he was appointed an assistant-surgeon to the frigate "La Gloire." In 1812 he became surgeon-assistant-major to the Military Hospital of Caen, but soon afterwards left the navy and went to Paris, in order to complete his medical studies, and to take his degree of Doctor of Surgery. During his sojourn in Paris, medicine was not, however, his only study, for comparative anatomy, botany, and physiology had occupied much of his time, and of those sciences he made himself eminently proficient, as well as in the art of drawing. When in Paris he became intimate with Cuvier, and his young mind was so deeply impressed by the wonderful discoveries of Mammalian remains brought to light through the genius of that celebrated naturalist, that on his return to Caen he lost no time in exploring the many quarries that surrounded his native town. Great, indeed, was his surprise and delight when he found them replete with fossil remains of all kinds; and the discovery of a specimen of *Teleosaurus Cadomensis* so elated him, that from that time comparative anatomy and palæontology became his chief and favourite studies. At Caen he met Lamouroux, and with him studied the corals, and was one of the contributors to the "Encyclopédie Méthodique," as well as of the "Dictionnaire des Sciences Naturelles." He was the chief founder both of the Museum of Natural History of Caen (of which he was honorary curator), and of the Linnean Society of Normandy, and has for years been the principal contributor to its transactions. In 1825 he succeeded Lamouroux as Professor of Zoology to the Faculty of Sciences of Caen, and on the 22nd of October, 1847, was elected Dean of the said Faculty, which chairs he retained till the day of his death. No professor could be more popular or more respected, and he inspired his pupils with a true love of science; indeed his noble mind was constantly bent on doing good, and in affording relief and encouragement to all those who were in need of his aid or advice. So important and varied were his researches and publications, that he was universally recognized as one of the most eminent palæontologists of his day. He published many excellent memoirs and monographs of the Fossil Mollusca which occur in the Oolitic and Liassic deposits of Normandy, and those which treat of the genera *Pleurotomaria*, *Plicatula*, *Turritella*, *Trochotoma*, *Eligmus*, etc., are particularly remarkable. He also

devoted considerable attention to the *Brachiopoda*, and we are indebted to him for a French Translation of Davidson's "General Introduction" to that group, as well as for the establishment of the genus *Argiope*. But his most important publications relate to the Crocodilian remains of Normandy.

Honours of all kinds were heaped upon him. He was a corresponding member of the Institute of France, and of numerous other academies and learned societies. A chevalier and officier de la Legion d' honneur, and a medallist of St Helena. In 1861 he received a silver medal from the Minister of Public Instruction. In 1863 a gold medal was presented to him as a reward for the first portion of his admirable work on *Teleosaurus*, and in 1864 another gold medal was awarded to him by the Academy of Sciences of Rouen. He was also a foreign member of the Geological Society of London.

About two years ago he had the great misfortune to lose the sight of one of his eyes, and the other having been much impaired, the calamity produced on his ever active mind a feeling of deep depression. On the 15th of November last he assisted at the inaugural opening of the session of the Faculty of Sciences of Caen, where his worthy and distinguished son was occupying his chair as professor of Zoology. Feeling his end fast approaching, his last few days were spent in dictating to his son what was still necessary in order to enable him to complete the great work on the Fossil Crocodilian remains of Normandy, upon which he had laboured during so many years. Remembering the compliments paid him by the Geological Society of London, he desired that his last great work should be dedicated to that society. On the 17th of January, 1867, he expired, aged 73 years and one month, deeply regretted by his numerous friends and admirers.

JAMES SMITH, Esq., of Jordan Hill, near Glasgow, F.R.S., F.G.S., whose death we announced in the last number of the GEOLOGICAL MAGAZINE, was born in the year 1782, and died on the 17th January, 1867, in the eighty-fifth year of his age. He was educated in the University of Glasgow. From his earliest years he had a taste for yachting, and it was said at one time he was the only yachtsman in the West of Scotland for many years. In 1806 he made a voyage in a very small vessel of about twelve tons, which accommodated himself and his companions, the late Professor Milne and Dr. Ure, and in this voyage, which lasted several weeks, they went as far as the Isle of Skye. In a subsequent voyage, a few years afterwards, he discovered the vitrified fort on the Burnt Island, in the Kames of Bute, and published an account of it in the transactions of the Edinburgh Antiquarian Society. He subsequently served as an officer in the Renfrewshire Militia, and was on duty at the Tower when Sir Francis Burdett was imprisoned there. After the peace he visited France and Italy, in which latter country he resided for some time, occupied chiefly with the study of the Fine Arts. About the year 1830 he began to take an active interest in the affairs of the Ander-

sonian Institution, which acquired a fresh life under his auspices, and continued to prosper under his presidency. He was the founder of its Natural History Museum. The very complete collection of Scotch coins attached to the museum was formed and presented by Mr. Smith. His first geological paper, entitled, "An indication of Changes in the relative Levels of Sea and Land in the West of Scotland," was read to the Geological Society of London on November 16th, 1836. This was followed by a series of papers on the same subject, read before the Geological and Wernerian Societies. His last paper to the Geological Society was read in February, 1862. These have now been published in a collected form, entitled, "Researches in Newer Pliocene Geology." Glasgow, 1862. The importance of Mr. Smith's original researches can hardly be over-estimated by geologists of the present day, evincing, as they do, not only changes in the relative level of land and sea, but also great climatal changes, as indicated by the remains of various organisms now extinct within the British seas, and which he was the first to point out as occurring in these raised beds, and as being of an Arctic character. Sir Charles Lyell, Mr. Geikie, and other recent writers on these deposits, all acknowledge the very great importance of Mr. Smith's observations in this department of geology, which, as Mr. Geikie truly states, were destined ultimately to cast much light on the complex history of the superficial accumulations of the country. The importance of these and subsequent researches have entitled Mr. Smith to be considered by many as the father of Post-pliocene geology. Mr. Smith resided for several years in the south of Europe, and published papers on the geology of Madeira, on the tertiary formations of Lisbon, and on the structure of the rock of Gibraltar.

Among the services rendered by Mr. Smith to the cause of scientific inquiry and research, special mention is due to his labours in the field of Scripture criticism and interpretation, which are connected with this period of his life, as it is in this department that he has acquired his most extensive, and what will probably be his most lasting reputation. In an essay on the "Sources of St. Luke's Writings," he gave evidence of an acute and scholarly cast of mind—though, from the difficult and somewhat speculative nature of the subject, different opinions will doubtless be entertained respecting the particular view advocated in the essay, and the measure of success with which the investigation is conducted. But in regard to another and more laborious line of inquiry—that relating to the voyage and shipwreck of St. Paul—there can scarcely be said to be any difference of opinion among competent judges, and theologians of high name and of various countries have united in their commendation of the eminent ability and skill displayed by Mr. Smith in his treatment of the subject. Mr. Smith was a member of the Geological Society of France, and was the President of the Geological and Archæological Societies of Glasgow—J. Y.

ROBERT DICK, of Thurso, though a hard-working man all his life, had such an irrepressible love for natural history, and so employed

his leisure hours, that he earned for himself a well-merited fame in scientific circles. He died at Thurso on the 17th of December last. We are glad to be able to present our readers with a short account of a man whose memory ought not to be lost. Mr. Dick was a native of Fifeshire, but went to Thurso when young. He learned to be a baker, and some time afterwards commenced business on his own account. During his apprenticeship Mr. Dick exhibited a taste for natural history. He would then spend even more than his spare hours in local explorations, and every work on botany and entomology was eagerly borrowed or acquired, and was read and studied with the greatest avidity. But it was when he became a journeyman, and especially when he arrived at the position of being his own master, that he devoted himself with the most singular earnestness to the study of science, spending many nights in the open air, and being on many occasions for several days and nights engaged in the investigation of the district, which in the end brought him into possession of a museum of fossils and botanical and entomological specimens, which has been the admiration of the multitudes of *savans*, from Sir Roderick Murchison downwards, who have been privileged to see it. Among the people of Thurso and neighbourhood Mr. Dick was long looked upon as partially insane; but, as time rolled on, opinions gradually changed. By-and-by it began to be whispered that men of great influence were visiting the mad Thurso baker; and when it was found that in the meetings of the British Association for the Advancement of Science he was honourably mentioned, and that even Sir Roderick Murchison had been receiving lessons from him—some of his illustrations being drawn on the walls of his workshop and his implements of trade—the opinion changed, and Thurso people took pride in naming the great scientific baker of their town. It was during his entomological and botanical explorations that Mr. Dick began to cultivate a taste for geology. By-and-by he became as deeply in love with it as with those other sciences, and in the end he acquired a wonderful acquaintance with the science, and was in frequent communication with the late Hugh Miller, Sir Roderick Murchison, and other geologists. His long and wonderful travels in the district, and his extraordinary painstaking investigations and researches have resulted in the accumulation of one of the most interesting collections of specimens to be anywhere seen. It is understood he has left the collection to the Thurso Natural Science Association, established last year, which will thus be in possession of a museum that many will covet. At a special meeting of this association, a letter from its president, Sir G. Sinclair, was read, in which he says—“The extent and variety of his scientific acquirements were incredible, and almost unexampled. He knew as much of many sciences as most professors knew about one. When my very distinguished friend, the Duke of Argyll, honoured me with a visit, he lost no time in repairing to Mr. Dick’s abode, and was most cordially received; but neither on that, nor on more than one similar occasion could I succeed in prevailing on Mr. Dick to breakfast or dine with me. His unassuming modesty

was as conspicuous as his wonderful knowledge." A resolution was moved by Mr. Docherty, seconded by Mr. Galloway, and unanimously agreed to, to the effect that "The members of the Thurso Natural Science Association are of opinion that means should be taken to mark the respect in which he was held, by raising some suitable memorial to his memory." It was further resolved that the Association should request the Chief Magistrate to convene a public meeting of the inhabitants of the town for the purpose of taking steps to carry out this object.

MISCELLANEOUS.

NEW SPECIES OF PLESIOSAURUS.—A fine addition has recently been made, by purchase, to the remains of *Plesiosaurs* in the British Museum—a collection already rich in the larger species of the genus. The specimen is from the Lower Lias, near Charmouth, and was obtained by E. C. H. Day, Esq., F.G.S., the fortunate discoverer, in the same locality, of the large specimen of *Plesiosaurus rostratus*, described and figured by Professor Owen, in the "Palæont. Soc. Mon. for 1865. The fossil has been skilfully developed from its matrix by Mr. Isaac Hunter, of Charmouth. The entire skeleton measures nearly fourteen feet in length, and has almost all the vertebræ in their natural sequence and position, a few only of the caudal series being displaced. The neck, which is slightly curved, is long, and gradually tapered to rather slender proportions at its connection with the head. A large portion of the cervical, and the whole of the dorsal vertebræ, with their spinous processes, and the ribs have been partially cleared from the rock in which they were embedded; thus giving an upper and under view of the skeleton, which is placed in a frame, with its ventral surface towards the observer. A plaster cast of the dorsal region, which would otherwise have been hidden, has been made and fixed above the specimen, to show the continuity of the series of vertebræ, which are entire, having their lateral processes and neural spines attached; the ribs are also preserved. This ventral view shows well the very large, perfect, and strong sternal and pelvic bones with their broad surfaces, for the attachment of the powerful muscles of the paddles; these are, however, imperfect, for, of the numerous bones of which they were composed, only the right humerus and femur, and portions of those of the left side are preserved. The head, which has lost the anterior portion of the muzzle, was, with a part of the neck, turned over when the animal was deposited in the mud of the Liassic sea, and is, therefore, seen from above. It is much larger in proportion than in *P. homalospondylus*, Ow., or *P. dolichodeirus*, Conyb., but not so large as that of *P. rostratus*, Ow. The neck is much longer than that of the latter species. The present specimen has been named by Professor Owen *Plesiosaurus laticeps*.—W.D.