

1863 to 1879. Professor Hans Bruno Geinitz was elected a Foreign Member of the Geological Society of London in 1857, and was Murchison Medallist in 1878.

#### ALPHONSE MILNE-EDWARDS.

BORN OCTOBER 13, 1835.

DIED APRIL 21, 1900.

By the unexpected death of Milne-Edwards a gap has been created in the foremost ranks of noted palæontologists and zoologists that it will be hard to fill; indeed, so long has his familiar name been a household word with us that it is still impossible to realize our loss.

Sprung from English stock, being the grandson of Bryan Edwards, M.P., a West Indian planter who settled at Bruges, Alphonse Milne-Edwards, son of the celebrated Henri Milne Edwards (1800-1885), was born in Paris, 13th October, 1835, and in his career followed closely in his father's footsteps.

He took his degree of Doctor of Medicine in 1860 and of Science in 1861; became an Assistant Naturalist at the Muséum d'Histoire Naturelle in 1862; Assistant Professor at the École supérieure de Pharmacie in 1864, and Professor there in 1865; Assistant Professor of the Zoological Laboratory of the École des Hautes Études in 1869, and Director in 1880; he was also appointed Professor of Zoology at the Muséum d'Histoire Naturelle in 1876, and finally its Director in 1892. He was elected a member of the Academy of Science, Section Anatomy and Zoology, in 1879, and of the Academy of Medicine in 1885. He was elected a foreign member of the Zoological Society of London in 1876, and in 1882 a Foreign Correspondent of the Geological Society.

His earliest papers were physiological, but he next turned to the study of Crustacea, both recent and fossil, while in 1863 he published his first paper on fossil birds, entitled "Mémoire sur la distribution géologique des Oiseaux fossiles." Three years later the first part of his monumental work, "Recherches anatomiques et paléontologiques pour servir à l'histoire des Oiseaux fossiles de la France," was issued, a work which when completed in 1871 extended to two volumes of text and two of plates. In it he showed the possibility of forming a classification of birds by means of their "long bones." Concurrently there appeared (1866-73) his "Recherches sur la Faune ornithologique éteinte des Îles Mascareignes et de Madagascar."

While these are the more important of his palæontological works they by no means represent a tithe of his scientific writings. He was associated with his father in bringing out the "Recherches pour servir à l'histoire naturelle des Mammifères" (1868-74), and with Grandidier in the volumes (1878-81) on Birds in the latter's "Histoire physique, naturelle, et politique de Madagascar." He was also keenly interested in the question of the distribution of animal life at great depths in the ocean, and it was at his instance and under his superintendence that the submarine surveying vessels the "Travailleur" and "Talisman" were sent out by the French Government; his work receiving acknowledgement in 1884 in

the award of the gold medal of the Société Géographique de France. Of minor papers on zoological and palæontological subjects contributed to various scientific journals and the proceedings of different learned societies, he must be credited with upwards of one hundred and fifty, dealing with nearly every group of the animal kingdom.

This busy and useful life was brought to a close after a short illness on 21st April, 1900. Alphonse Milne-Edwards will be as sincerely mourned by us as by his own countrymen, for the man of science belongs to the world.

### JAMES THOMSON, F.G.S.

BORN DECEMBER 18, 1823.

DIED MAY 14, 1900.

IT is well known that the natural taste or instinct of observing and trying to explain the manifold phenomena of Nature, animate and inanimate, is strongly developed in many individuals; and that, in spite of great and various difficulties, it has produced good results to the scientist in particular and to society in general.

The late Mr. James Thomson, of Glasgow, was a notable example of the energy and persistence in the line of research that he chose to follow, in the long uphill struggle of hard work against penury and family misfortune. Snatching a few hours from early morning sleep, he got a little schooling; and this was all the basis he had for a scanty education. His strong self-reliance helped him much in after-life, but became inseparable from his self-opinionatedness, when advised by the Editors of the Scientific Journals in which the results of his workings on the structure of corals were published. Not fully appreciating grammatical accuracy, and sadly wanting in a knowledge of Latin, which language naturalists use for genera and species, his mistaken obstinacy led to disagreements and disappointments between him and his willing literary helpers in Glasgow and London. For some years he had taken up the study of the fossil corals abounding in the Carboniferous Limestone of Western Scotland; indeed, in his native town he had noticed, when a boy, these fossils in the "Bed of Kilmarnock Water." Ultimately, a goodly set of memoirs were produced (upwards of twenty before 1883, and others since), enriched with illustrations of the peculiar structures of the several kinds of corals described therein. Of these illustrations, very many were delicate outlines produced by a process kept secret by Mr. Thomson, who (like Dr. J. A. R. Hunter-Selkirk, of Braidwood), having a small water-power at hand, applied it to cutting and slicing of thousands of Carboniferous fossils. To the polished surfaces of the corals, Mr. Thomson probably applied such a solvent as removed the matrix, but left the organic tissue of walls and septa sufficiently prominent to serve for impressions and printings, and for transference to copper-plates and lithographs. His last two papers on the Scotch Carboniferous Corals in the Transactions of the Geological Society of Glasgow (vol. xi, pt. 1, 1897) are especially illustrated by this process.

Mr. Thomson had a good general knowledge of geology, and his natural acumen in that research was shown in his account of the