

OBITUARY.

VALENTINE BALL, C.B., M.A., AND LL.D. (DUBLIN),
F.R.S., F.G.S., M.R.I.A.

BORN JULY 14TH, 1843.

DIED JUNE 15TH, 1895.

FEW men of science were more widely known or more cordially esteemed than Dr. Valentine Ball, the distinguished Director of the Dublin Museum of Science and Art, whose premature loss we have to deplore.

Valentine Ball was born in Dublin July 14th, 1843, and was the second son of the well-known Naturalist, Robert Ball, LL.D., who died in 1857. He was educated at Dr. Brindley's, Chester, subsequently at Dr. Henry's and Dr. Benson's private schools in Dublin, and at Trinity College, Dublin. He graduated in the University of Dublin, B.A., 1864; M.A., 1872; LL.D. (*honoris causâ*), 1889. He was elected a Fellow of the Geological Society of London in 1874; Fellow of the Calcutta University (*honoris causâ*) in 1875, and Fellow of the Royal Society of London in 1882. He was elected President of the Royal Geological Society of Ireland in 1882. He was appointed Clerk in the Receiver Master's Office, Dublin, 1860-64; and joined the Staff of the Geological Survey of India in 1864, and served till 1881. On his return to Ireland he was appointed Professor of Geology and Mineralogy in the University of Dublin, and held office from 1881 to 1883, when he became Director of the Science and Art Museum in Dublin, which office he held until his death. Dr. Ball was also Honorary Secretary of the Royal Zoological Society of Ireland, and a Member of the Council of the Alexandra (Ladies) College, and of that of the Royal Irish Academy.

His published works are—"Jungle Life in India, or the Journeys and Journals of an Indian Geologist," 1880; "The Diamonds, Coal, and Gold of India," 1881; "The Economic Geology of India," 1881; an English Translation of "Travernier's Travels in India," with Notes and Appendices, etc., 1889. Besides numerous contributions to learned societies, he published several Memoirs on the Geology of extensive tracts in India, and accounts of his visits to and explorations in Afghanistan and Beluchistan, the Andaman and Nicobar Islands, the Himalayas, etc. As a collateral result of his explorations in the wild and then little-known central regions of the Peninsula of India, where he first discovered several coal-fields, he was enabled to suggest to the Government the most desirable line of route for a direct railway between Calcutta and Bombay. This route has now been adopted, after several years spent in surveys of the various alternative routes. Several of his more important recent contributions to societies are upon the "Identification of the Animals, Plants, and Minerals of India which were known to the Ancients." In the year 1884 he presented a Report to the Science and Art Department on the Museums of America; it was subsequently published in the Department's Annual Report. He contributed three articles to the GEOLOGICAL MAGAZINE on the "Volcanoes of the Bay

of Bengal," 1879, p. 16, Pl. I; 1888, p. 404; and 1893, p. 289, Pl. XIII; and "On the Mode of Occurrence of Precious Stones in India," 1884, p. 516; "On Eroded Agate Pebbles," 1888, p. 231; "On the Transport of Granite found in the Carboniferous Limestone, Dublin," 1888, p. 232. He filled the office of President at the late meeting of the Museums Association in Dublin in 1894. With most of the scientific societies of Dublin Dr. V. Ball was in intimate association, especially with the Royal Geological Society, of which he was the arduous Secretary for so many years.

In 1869 Dr. Ball married the eldest daughter of the late John Stewart Moore, of Moyarget, county Antrim. He leaves a family of four children. For some years Dr. Ball's health had been failing. About ten days previous to his death serious symptoms were manifested, and he passed away on the afternoon of Saturday, June 15th, at his residence, 28, Waterloo Road, Dublin.

PROFESSOR WILLIAM C. WILLIAMSON, LL.D., F.R.S.

BORN NOVEMBER 24TH, 1816.

DIED JUNE 23RD, 1895.

By the death of Professor W. C. Williamson, Palæobotany has lost one of its most earnest and energetic investigators and exponents, whose memoirs will long remain a record of persevering labour combined with remarkable genius and originality of thought.

William Crawford Williamson was born at Scarborough on November 24th, 1816. His father was for some time head gardener to the then Earl of Mulgrave, at Lyth Castle, near Whitby, where, having laboured indefatigably in exploring the geology and zoology of the coast of Yorkshire, and made a rich collection of its fossils and recent shells, he was, in 1828, appointed Curator of the well-known Museum of the Literary and Philosophical Society of Scarborough, amongst the collections of which much of his son's early youth was beneficially spent. Young Williamson was destined for the medical profession, but, in 1835, accepted the curatorship of the Museum of the Manchester Natural History Society. Whilst at Scarborough he contributed to the Geological Society of London the first of three memoirs on the "Vertical Distribution of the Organic Remains in the Strata of the Yorkshire Coast," and one to the Zoological Society of London on the "Birds of the Yorkshire Coast," as well as published a description of the well-known tumulus and its contents then recently opened on Gristhorpe Cliff. On reaching Manchester his attention was at once directed to the local geology, and soon resulted in the publication, in the Philosophical Magazine, of a memoir on the "Remarkable Limestones of Ardwick," which form the uppermost part of the Carboniferous strata in that neighbourhood.

In 1838 he resumed his medical studies, first in the Manchester Medical School, Pine Street, and afterwards in University College, London; and in January, 1841, he commenced as a medical practitioner in Manchester. Soon after that he began a series of investigations amongst the recent Foraminifera, the results of which were a succession of memoirs on their minute organization,