

DR. J. R. HENDERSON.

DR. JOHN ROBERTSON HENDERSON, C.I.E., who died in a nursing home in Edinburgh on October 26, was an example of that "brotherhood between medicine and natural history in its widest sense" which has been a conspicuous product of the University of Edinburgh.

Born in Melrose in 1863, and educated at Dulwich College and Dollar Academy, Dr. Henderson graduated in medicine at the University of Edinburgh, and, influenced by the teaching of Sir Wyville Thomson, turned at once to those studies of marine animals which engaged his attention during the remainder of his life. He was one of the distinguished band of naturalists (which included Hugh Robert Mill, J. T. Cunningham, W. A. Herdman, and W. E. Hoyle) associated with Sir John Murray's oceanographical investigations after the return of the *Challenger*, first on *The Ark*, a canal barge anchored as a floating marine laboratory near Granton on the Firth of Forth, and later, on the steam yacht *Medusa* on the west of Scotland.

In 1886 Henderson was elected professor of zoology in Madras Christian College and relinquished that post in 1911, having, on the retirement of Mr. Edgar Thurston in 1909, been appointed Superintendent of the Madras Museum and Connemara Public Library and Keeper of the Marine Aquarium. On his retirement under the age limit a few years ago, he returned to Edinburgh and at once took part in the scientific activity of the city. At his death he was a fellow of the Royal Society of Edinburgh, and a member of council of both the Royal Physical and Scottish Zoological Societies. His experience in conducting and transforming the well-known Madras aquarium was of much service in the adjustment of the final arrangements of the large aquarium now being erected by the latter Society at the Scottish Zoological Park.

Henderson's zoological researches were almost entirely confined to marine invertebrates. As a result of his early years on the Forth and the Clyde, he made many contributions to the faunal lists of zoophytes, mollusca, echinoderms and crustacea of these areas, mainly published in the Proceedings of the Royal Physical Society. He was responsible for the account of the Anomura in the *Challenger* Reports, and continuing in India his work on crustacea, he described the Paguridæ collected by the *Investigator*. His most important work there, however, lay in the impetus he gave, by teaching and example, by his extension and development of the natural history section of the museum and of the aquarium, to the study of animal life in the laboratory, in the schools, and in the field.

Henderson was a man of wide interests; he wrote an excellent catalogue of the coins of Tipu Sultan, and his goodwill and the geniality which never flagged under the burden of ill-health gained him many appreciative friends in India and at home.

J. R.

DR. R. A. JOYNER.

DR. R. A. JOYNER lost his life as the result of an accident on Wednesday, October 7, through an explosion in the research laboratories of Messrs. Nobel's Explosives Co., Ltd. Dr. Joyner studied at University College, Bristol, taking a London degree with honours in

chemistry in 1909, followed by the M.Sc. degree of the newly founded University of Bristol in 1910. His work during this period is recorded in three papers on amalgams of silver and tin published in the Journal of the Chemical Society. These exhibit his careful and thorough experimentation and stand unaltered. They form the accepted basis of the treatment of dental amalgams in modern courses on dental metallurgy.

Joyner proceeded as an 1851 Exhibition Scholar to Zürich and afterwards followed Bredig to the Technische Hochschule, Karlsruhe, where he qualified for the degree of doctor of engineering, which has seldom been obtained by students from abroad. His exceptional ability and independent judgment were recognised by Bredig. He published two very pretty experimental papers, one on the affinity constant of hydrogen peroxide, the other on the catalysis of camphorcarbonic acids by bases in various solvents which further elucidated the remarkable parallelism between ordinary reactions and life processes, showing a mechanism through which optical activity may play its well-known rôle.

For twelve years Dr. Joyner served on the research staff of Messrs. Nobel's at Ardeer, and most of the important work which he carried out on such War-time problems as mustard gas and explosives is of course not available for publication, but an estimate of his unusual experimental skill and scientific acumen may be obtained from a study of the paper which he published in the Journal of the Chemical Society on the viscosity of solutions of cuprammonium.

Those who came in contact with Joyner must have realised that few scientific workers showed such whole-hearted devotion and enthusiasm. He had many other interests, having been versatile in athletics and being a keen Territorial officer for many years. His straightforward and unassuming personality gained him not only esteem but also affection from all who knew him. In spite of the tragedy of his loss at the age of thirty-eight years, his widow and three children can look back with pride on his devoted work in the cause of science

WE regret to announce the following deaths:

Sir Alfred Woodley Croft, K.C.I.E., president in 1892-93 of the Asiatic Society of Bengal and sometime trustee of the Indian Museum and Vice-Chancellor of the University of Calcutta, on October 29, aged eighty-four years.

Dr. Theodor Fuchs, corresponding member of the Vienna Academy of Sciences and honorary director of the geological and palæontological section of the Natural History Museums in Vienna, on October 5.

Dr. Carl Kupelwieser, honorary member of the Vienna Academy of Sciences, and a founder of the Institute for Radium Research at Vienna and of the Biological Station at Lunz, on September 16.

Mr. H. B. Mullen, Director of Museums and Libraries, Salford, and formerly an assistant in the Art and Ethnographical Department, National Museum of Ireland, on October 26, aged sixty-three years.

Mr. M. J. Nicoll, formerly assistant in the Zoological Gardens at Cairo, the author of numerous ornithological papers published chiefly in the *Ibis*, on October 31, aged forty-five years.

Dr. Henry H. Robinson, superintendent of the Connecticut Geological and Natural History Survey since 1920, on October 20, aged fifty-two years.