

## Obituary.

DR. CHARLES HOSE.

DR. CHARLES HOSE, whose death on Nov. 14 we much regret to record, was born on Oct. 12, 1863. From his father he inherited that love of wild Nature which characterised him throughout his life. As a boy, he was a keen naturalist and continued his habit of collecting and observing while at Felsted School. In 1882 he was admitted to Jesus College, Cambridge, but did not take a degree, as in his second year his uncle, the Bishop of Singapore, Labuan, and Sarawak, obtained for him a cadetship under Rajah Sir Charles Brooke, and on April 15, 1884, he landed at Kuching and was at once sent to the Baram district, where he remained for about eighteen years. In 1904 he was appointed Resident of the Rejang district and retired on Aug. 20, 1907, when he returned to England. In 1916, Dr. Hose was appointed superintendent of the munitions factory at King's Lynn, and in 1918 was chairman of the Cotton-waste Mills Investigation Committee.

Dr. Hose was given an honorary Sc.D. at Cambridge in 1900, and was elected an honorary fellow of Jesus College in 1926. He was a member of various scientific societies and the recipient of orders from several European countries. A list of the publications by Charles Hose, compiled by Prof. G. H. F. Nuttall, is given in "Fifty Years of Romance and Research of a Jungle-Wallah at Large" (1927), in which book will also be found an enumeration of the new genera and species of animals collected by him. A perusal of the titles of the papers written by Dr. Hose or with his collaboration, and of those dealing with the specimens he collected, will give some idea of his remarkable energy and the width of his interests. The result of his labours has been to add greatly to our knowledge of the zoology of Sarawak, and all anthropologists acknowledge the unrivalled extent and value of his contributions to the ethnography of that country.

Mention should also be made of the prolonged investigations made by Hose into the cause of beriberi; he came to the conclusion that the principal cause of this disease in Borneo was the consumption of mouldy rice. It is now admitted that the disease is frequently due to a preponderant consumption of white rice, that is, rice which has been polished by the removal of the husk and outer layers which alone contain the all-important vitamins. Dr. Hose's observations and experiments provided valuable data towards the elucidation of this problem. It was also due to his persistent efforts that the wealth of Sarawak has been enormously increased by the discovery and development of the greatest petroleum-producing area, except Burma, within the bounds of the British Empire. Hose was an insatiable collector, and a large number of museums throughout the world contain zoological and ethnographical specimens and collections given by him, but he did not neglect plants and geological specimens.

When I was preparing for the Cambridge Ex-

pedition to Torres Straits, I received a most cordial invitation for my party to visit Dr. Hose in the Baram district. His offer was so tempting in its promises that I could not refuse, and the results of that visit have been far-reaching. We had the opportunity of seeing the respect and affection in which the Resident was held by the varied tribes of the district, and how they came to him with their difficulties, which were often of a personal and intimate nature. None of us will forget the wonderful gigantic peace celebration which cemented friendship between various estranged tribes and incidentally proved the power and beneficence of the Government.

We found that Hose had a very extensive and detailed knowledge of the natives, which was stored in his remarkable memory and more or less recorded in notes. He then began to collaborate with Dr. W. MacDougall, and the partnership finally resulted in the great and richly illustrated work, "The Pagan Tribes of Borneo" (2 vols., 1912), which will be a lasting memorial to Charles Hose. It was a happy combination, for though he was supreme as a collector and observer, Hose had never had a scientific training, and the method and restraint of MacDougall were of great service in bringing the great wealth of crude matter into due form.

To the last Dr. Hose retained his youthful enthusiasms and outlook; he was always seeking to know about things, and when that knowledge was obtained he utilised it in various ways. He was essentially a field naturalist, and these qualities, combined with his genial character and his sympathetic appreciation of native thought and custom, enabled him to become a notable administrator who has left an indelible impression on his beloved Sarawak.

A. C. HADDON.

## PROF. RICHARD ZSIGMONDY.

SCIENCE generally has suffered a very severe loss by the recent death of Prof. Richard Zsigmondy, late Director of the Institute for Inorganic Chemistry at Göttingen. For years he has been one of the most prominent figures in the field of colloid chemistry.

Richard Zsigmondy was born in Vienna on April 1, 1865. Even as a young boy he showed great aptitude for experimental science, and he pursued the study of chemistry at the Technical High School at Vienna and at the University of Munich. After graduating for the degree of D.Phil., he became private assistant to Prof. Kundt at Berlin, and in 1893 he obtained his "Privatdozent" at the Technical High School at Graz. Four years later he was employed as scientific worker by the well-known firm of glass manufacturers, Schott of Jena. The outcome of his investigations with this firm was the preparation of a specially uniform Jena opalescent glass. After leaving the firm, Zsigmondy became a private teacher in Jena, and it was during this period that