

## OBITUARIES

## Dr. John Ball

BY the death of Dr. John Ball, science has lost a man of outstanding character and calibre, whose experience and contributions ranged over a wide field. His career was marked by hard work, enthusiasm, an inquiring and penetrating mind, a perception of essentials, with bold ideas and restless vigour. John Ball loved a problem and was relentless in pursuing it. New evidence and new methods usually intrigued him, though at times he seemed obdurate before accepting them. Many who read this obituary will remember with affection the breathless discussions in Egypt, London, and elsewhere, in which his partial deafness was overcome by cheerful enthusiasm, his electric device, and the seemingly endless supply of new batteries. He loved a meeting of those who shared common interests, such as the Zorzura Club of desert travellers, and the conversation on these occasions remained practical, technical, constructive; there was always something worth learning. He served in Egypt for forty-four years, and remained there during the present War; to this fact possibly his recent death in his seventieth year may be attributed.

The following is a brief sketch of Ball's career. He was educated at the Royal College of Science and Royal School of Mines, Freiberg, and the University of Zurich, and apprenticed to the Phoenix Foundry Co., Derby, where he was engaged on some important engineering works, including the Battersea Bridge, and the Liverpool Overhead Railway. The Royal School of Mines recognized his merit: then his career took him into mining, and he spent a year or so in Germany and Spain. From this period of his life four sciences already seemed to stand out, namely, mathematics, engineering, surveying, and geology. He was a marked man for the type of reconstruction and development which was afoot in Egypt at the end of the last century, and joined the Survey of Egypt in 1897. The second period of his career, which had a logical development over nearly half a century, showed the same basic interests. He was responsible for under-pinning the Temples at Philae during 1901-2 when the Assuan Dam was constructed. There was a primary demand for his geology and surveying, which bore fruit not only in his classical work on the geology of the First Cataract, but also in the early surveys of the Libyan oases of Kharga, Baharia, Kurkur, and of the south-eastern deserts of Egypt.

Geology and topographical survey developed Ball's interest in wider exploration, and the War of 1914-18 provided unexpected opportunities. John Ball and other officials and officers ranged far beyond the Egyptian oases of the Libyan Desert with the military motor patrols, and over Sinai; useful series of maps were produced for military purposes. He conducted surveys for the British Government in Somaliland and Arabia, and collaborated with the R.A.F. in the surveying of the Cairo-Baghdad air route in 1921.

Among all these efforts, the Libyan Desert seems to have intrigued Ball more than any, and it is in a sense true to say that much of his interest in the period from 1919 was devoted to that empty quarter. Thus he accompanied Prince Kemal ed Din on three of his expeditions, including the momentous journey to Merga and Uweinat. Many problems set his logical brain at work; for example, the nature and origin of the artesian water supplies in the oases, the growth and movement of the great sand dunes, and later the Qattara Depression near the Mediterranean coast, considered as a potential source of hydro-electric power. The examination of these problems of the Libyan Desert, which could not be the work of one man, was shared first by the small band of Survey officers past and present, secondly by a growing number of travellers who were not officials of the Egyptian Service. Discoveries and routine work of all of them were grist to the mill. Cars replaced camels, the sun compass, of which Ball was a pioneer, superseded native guides. His contributions included his early use, if not the first, of the depression angle method of coastal surveying, and his "Handbook of the Prismatic Astrolabe".

For many years after 1918, Ball was Director of Desert Surveys in Egypt, and then Technical Counsellor until his death. In his later years none of his interests seemed to flag. His last considerable work was his "Contributions to the Geography of Egypt" (1939)—in effect a series of essays on problems that had long claimed his attention, especially the development and history of the Nile and of its perplexing and troublesome appendix the Faiyum. In these essays all the initiative, perception and youthful enthusiasm remained, and if others may not agree with all his conclusions, nevertheless his evidence and deductions are clear for all to read.

John Ball received many honours, and perhaps those which he valued most were the De la Beche Medal of the Royal School of Mines, his D.Sc. of the University of London, the Mejidie (for his work at Philae), and the Victoria Medal of the Royal Geographical Society (primarily for his pioneer scientific work in the Libyan Desert). His wife and son survive him.

K. S. SANDFORD.

WE regret to announce the following deaths:

Prof. M. Bodansky, professor of pathological chemistry in the Texas University School of Medicine, aged forty-five.

Mr. W. H. Heaton, formerly principal of University College, Nottingham, aged eighty-five.

Prof. F. Kafka, director of the Psychiatric Clinic in the German University of Prague.

Prof. H. Klein, professor of neurology and psychiatry in the University of Leipzig, aged sixty-six.

Prof. A. Westphal, professor of neurology and psychiatry in the University of Bonn.