George Forbes, M.A., LL.D., F.R.S.

PROFESSOR GEORGE FORBES, son of Principal J. D. Forbes, D.C.L., LL.D., F.R.S., was born in 1849. He was educated at St Andrews and Cambridge Universities, and afterwards worked for a year under Professor P. G. Tait in Edinburgh, and with Sir George Airy at Greenwich. At the age of twenty-three he was appointed Professor of Physics at Anderson's College, Glasgow; in 1874 he conducted the Hawaii expedition for the transit of Venus; in the next year he travelled from Pekin to St Petersburg across the Desert of Gobi, and in 1877 was special correspondent for *The Times* in the Russo-Turkish War. In 1880 he gave up his Chair to work with Dr James Young on the velocity of light. In 1881 he turned to electrical engineering, then in its infancy, becoming manager of the British Electric Light Co., and erecting the first generating station in London. After a year he started as a consultant and inventor, devising, *inter alia*, a new design of two-pole dynamo and his well-known unipolar dynamo, likewise the carbon brush now universally used, and an alternating current meter. In 1890 he submitted plans for the hydro-electric scheme at Niagara, putting forward a novel form of alternator. He was appointed consulting engineer for the work, and his alternators of 5000-h.p. were adopted. After this he was much engaged in water-power schemes in various parts of the world up to the end of the century. The South African War turned his attention to range-finding, and a remarkable instrument on a new principle resulted. The Admiralty retained him for further work on range-finding for some years, and that practically concluded his professional work. Afterwards he wrote several books, chiefly on astronomy, and all through his life he contributed papers on many subjects to the Royal Societies of London and Edinburgh, The Astronomical Society, The British Association, The Institutions of Civil and Electrical Engineers and others. In his later years he concluded from certain disturbances in the paths of the known planets that another planet existed beyond Saturn. Such a planet has since been found, though not quite in the place he expected.

A bare catalogue of his varied activities, of which the foregoing is far from complete, makes lengthy reading. He was a man of restless energy and unusually wide capabilities. Alike in experimental physics, astronomical mathematics, invention, and large-scale engineering his name is

well-known as an original and gifted worker, and, as the writer can testify, his knowledge was by no means confined to parts of special interest to himself. Like his friend and contemporary, W. B. Blaikie, he was a man who did not suffer fools gladly; but he was no Sir Oracle, though his store of knowledge and experience and keen intellect gave him a large share in conversation. Anyone who was quick on the uptake was sure of appreciation, if he had something to contribute. Forbes' tastes were extremely simple, and he so disregarded material gain that his circumstances were not too good in his last years. It is curious that though he occupied a chair for only eight years in very early life, he was always Professor George Forbes to the end. It honours the title that such a man could be called nothing else. He was elected a Fellow of the Society in 1872 and died on 22nd October 1936. He never married, doubtless owing to the pressure of more important interests.

See also *Obituary Notices of Fellows of the Royal Society*, 1937.

F. G. B.