

Obituary.

Christopher Thwaites, M.Inst.C.E., F.R.A.S.

Christopher Thwaites was born on 1840 December 9, at 74, Holborn Bridge, St. Andrew's, Holborn, in the City of London, and was the eldest son of Sir John Thwaites, Kt., Deputy-Lieutenant for Middlesex and first Chairman of the Metropolitan Board of Works.

He was educated at Uxbridge and Brighton and later entered King's College, London, where he studied with distinction, doing especially well in engineering and received a prize for the construction of a lathe.

His first appointment after passing through King's College was connected with the Sligo Railway in Ireland, where he carried out some extensive survey work. In 1865 he went to

India as Deputy City Engineer to the City of Bombay, eventually becoming Acting City Engineer. These appointments he held for five years, during which he was responsible for a large drainage scheme and a new water supply.

In 1870 he returned to England and took up a practice as Consulting Engineer at Westminster. Two years later he was appointed City Engineer of Norwich, a post he held until 1875. From thence he proceeded to Sunderland as Borough Engineer, where he remained for the next four years.

1879 saw him again in London, but in very poor health, the result of sewage poisoning contracted in the execution of his duties.

He retired about 1885 and went to live at Beccles, Suffolk, until the year 1893. Thence he lived again in Norwich and once more engaged in private practice until 1896, when he removed to Sutton, Surrey, where he lived until his death on 1929 December 4. He was buried at Nunhead, in the vault of his father, on his 89th birthday.

In his early days Thwaites was not given much to the usual sports connected with school life, being of a studious disposition. The headmaster of his school at Brighton was astronomically inclined and it was while with him Thwaites first came into touch with our science, an interest he maintained throughout his long life.

He began with a comparatively small instrument—a $2\frac{3}{4}$ -inch refractor—about 1854 and later he worked with a 6-inch and then a 5-inch Cooke, but he was also familiar with the use of reflectors. His studies were very varied, but perhaps his most important observations were those which he undertook at the Indian Eclipse of 1898. His previous knowledge of India peculiarly fitted him to organise the B.A.A. Expedition to Talni, and this he did in collaboration with Mr. Walter Maunder and others. He had the loan of a $4\frac{1}{4}$ -inch Cooke photo-visual refractor from Mr. G. J. Newbegin, with which he obtained some beautiful photographs of the Corona.

Again, in 1905, he was selected to direct the B.A.A. Expedition to Burgos, in Spain, and took the same instrument. It was while rehearsals for this eclipse were in progress H.M. the King of Spain visited the camp and Thwaites had the honour of conducting His Majesty around the camp and explaining the different instruments and their uses.

To one who knew Thwaites from his (the writer's) early life, he was a staunch friend. Of a somewhat retiring disposition he was not very communicative about his own affairs, but he had a fund of general knowledge which he was always ready to hand on to others, and one could not be in his presence very long before being struck with his kind, genial manner and his old-world courtliness.

He was a keen sportsman with the gun and also indulged in fishing. It was while in India in his early years, when out shooting one day, he nearly lost his life. Seeing an object suspended from a tree which excited his curiosity, he fired at it and, to his astonishment, there proceeded from the object a small black

cloud which made straight for him. He watched it for some moments, then he heard a buzzing noise and he decided at once that the black cloud must be bees. A boat was near by, from which he had landed, and this he ran for, but the bees overtook him and settled upon his head, stinging him unmercifully. Had it not been for his extensive beard he would probably have been stung to death. The extraordinary part of this adventure was that the bees had not the slightest interest in the three natives who were with Thwaites and not one of them was stung.

About 1875 Thwaites married Miss Emma Grove, by whom he had two sons and one daughter.

For many years he served on the Council of the B.A.A., and he was elected a Fellow of the R.A.S. in 1886. He was also a Member of the Institute of Civil Engineers, and for some years a Fellow of the Royal Photographic Society.