

theology, with the intention of entering the Church; but he was at the same time also deeply interested in natural science, and he attended the lectures of Quenstedt, who filled him with enthusiasm for geology and palæontology. He worked hard in collecting fossils and making geological observations in Swabia, and when he had the opportunity of spending a year in Paris, in 1847, he attended the lectures of D'Orbigny and Elie de Beaumont at the School of Mines. On returning to his native country, Fraas followed his theological profession, and from 1850 to 1854 he was pastor of Laufen a. d. Eyach. In 1854 he became Conservator of the Department of Mineralogy and Palæontology in the Royal Württemberg Museum at Stuttgart, an office which he held until a few years ago, when, on the retirement of Dr. von Krauss, he succeeded to the Directorship, and left his son, Dr. Eberhard Fraas, in charge of the minerals and fossils. In the course of his official labours, Dr. Oscar von Fraas not only made the Stuttgart collection one of the finest in Europe, and enriched it with Swabian fossil batrachians, reptiles, and mammals, many of which are absolutely unique; he also published popular writings to interest the people in his work, and carried on a long series of researches, of which the results appear in more than sixty papers and memoirs. Most of these relate to the geology, fossils, and prehistoric archæology of Württemberg; but some also recount his experiences in the East, which he visited in 1864-5, and again in 1875. He paid special attention to the geology of the Lebanon; and the scientific results of his journeys through Syria are collected in a small volume entitled "Aus dem Orient," which was published in two parts (1867 and 1878). Among his larger memoirs, those on the Miocene Mammalian Fauna of Steinheim (1870), and on the armoured reptile *Actosaurus* from the Swabian Trias (1877), are especially important contributions to knowledge. Dr. Oscar von Fraas was elected a Foreign Correspondent of the Geological Society of London a few days before his death.

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LIEUT.-COLONEL CHARLES COOPER-KING, F.G.S.

BORN FEBRUARY 4, 1843.

DIED JANUARY 16, 1898.

CHARLES COOPER-KING, Lieut.-Colonel Royal Marine Artillery (retired), died at his residence, Kingsclear, Camberley, Surrey, on the 16th of January, 1898, aged nearly 55 years. The only son of Major U. H. King, R.M., Light Infantry, he was born at Plymouth. He was at school there until the end of 1859, passed into the Royal Marines as a Marine Cadet in January, 1860, second on the list, and joined H.M.S. "Excellent." He passed as a Second Lieutenant R.M. at the Royal Naval College, Portsmouth, first on the list (1862); and, recommended for the R.M. Artillery, he was gazetted at Fort Cumberland. In 1864, he was appointed to command the detachment of Marines on H.M.S. "Scylla" in the China seas and Japan. He was promoted to First Lieutenant in 1865; and rejoined headquarters (Eastney) in 1867. He passed (fourth) into the Staff College, July, 1868; and in August he

married Harriet, daughter of the late C. V. Garrett, of Southsea. Passing out of the Staff College, first on the list, and specially recommended, he went through the usual course of study and practice in regimental duties at Aldershot, and the long course of gunnery at Woolwich and Shoeburyness (1871). He was appointed Instructor of Tactics, Administration, and Law at the Royal Military College at Sandhurst, 1872; and was Professor of the same subjects 1878-1885. His promotion as Captain dates November, 1875, and Major by Brevet, 1879. He retired from the Service February, 1886; and devoted his time and energy as a military instructor or "coach," preparing subalterns of the Militia for commissions in the Army. He leaves two daughters and five sons; two of the latter are Lieutenants in the Army.

After the systematic study of geology and chemistry was eliminated from the curriculum at the Staff College, and the professorships thereof had ceased, Colonel C. Cooper-King succeeded Major Mitchell as Lecturer on Geology in 1886. Dealing also with such other branches of Natural Science as the officer-students could find time to study, his synopsis of these lectures on "Applied Science" embraced not only the land, but water (fresh and salt), air and weather, magnetism and electricity, as well as food and forage. Colonel Cooper-King drew a large class to geology, both in the lecture-room and the field; for, being a military expert himself, his explanations of the science in relation to military tactics and battlefields were well appreciated.

Whether on the blackboard or on paper, his apt and facile illustrations of geological conditions and natural-history facts were very acceptable to his students and his scientific friends. Always observant, and ready with pen and pencil, his notebooks were rich with reminiscences of places and people, visited or met with, at home and abroad. In spite of frequent illness, due to rheumatism and heart-failure, his energy spurred him to persist as a hard worker, whether in the study on literary matters, in the field as military correspondent, or in his class-room among military students. Many of his friends in the Army remember with pleasure, and often with gratitude, the advantages they received from his teaching, as private instructor or at college; and, indeed, he was always ready to help, both cadet and officer, with advice and solid information.

He was an Assistant-Examiner in Geology, Geography, and Physiography for the Science and Art Department (South Kensington) and the Civil Service Commission for twenty years.

As literary work, we may notice his books—"On Map and Plan Drawing," "History of Berkshire," "George Washington," "The British Army," and "The Story of the British Army," the last-mentioned lately published. He was Editor of the "Great Campaigns in Europe," and for some time of "The United Service Magazine." Reviews, notices, and miscellaneous pieces by C. Cooper-King are scattered in different periodicals.

In his "History of Berkshire" (E. Stock, London, 1887), a good

knowledge of geology underlies his sketch of the county and description of the ways and doings, not only of prehistoric man in the region, but of the many events in historic times during the conquests and civil wars of Berks. The natural features, which have had an effect in the development of the county since the first nomad lived and fished along the banks of the Thames down to the time in which we live, are carefully considered. We have here a sketch of the evolution of the county, in its races, its homes, fortresses, arts of life, domestic and military; and in its ecclesiastical, military, municipal, and civic relations.

In this, too, his antiquarian knowledge gave his story vigour and accuracy. The ancient camps and earthworks were ably elucidated in the Transactions of the Newbury District Field Club, of which he was a worthy honorary member.

His clear and succinct account of the Stone Implement Station in Wishmoor Bottom, near Sandhurst, Blackwater, and Camberley, with a good plan and an explanation of the structure of the ground, is published in the Journal of the Anthropological Institute, vol. ii, No. 6 (January, 1873), pp. 365–372, pls. xx and xxi. Also noticed in the Brit. Assoc. Report for 1872, Sections p. 190.

Colonel Cooper-King was elected a Fellow of the Geological Society in 1872. In 1875, he communicated to that Society a paper, written in conjunction with his friend T. Rupert Jones, on some newly exposed sections of the “Woolwich and Reading Beds” at Coley Hill, Reading, Berks (Quart. Journ. Geol. Soc., vol. xxxi, pp. 451–457, pl. xxii). The features then exposed were correlated with those of neighbouring sections described by Buckland and Rolfe many years ago, and more lately by Prestwich and Whitaker. Two zones of clay-galls were particularly described, and the beds and levels from which these balls of clay (and ochreous nodules) were derived were carefully indicated.

Together with the same friend, Colonel C. Cooper-King had long studied the conditions and characters of the Bagshot Sands; and his acute observation and thoughtful conclusions must be regarded as having given value to the papers on the Bagshot district published in the Proceedings of the Geologists’ Association, vol. vi, 1880–81, pp. 319, 429, etc.

His high grade in college work indicated his mental capacity, strong will, and power of endurance; and his subsequent career showed his versatility and broad intellectual grasp, also his determination to use his gifts for the benefit of his country and especially of those around him.

Thus a man of talent, of great capabilities, of high attainments, and enormous energy, conscientiously and willingly exercising his powers for the good of others, and working hard for the support of his family even to the last, has passed away, like a goodly fruiting tree torn away by the ruthless tide of a flooded river, which will distribute the seeds in far-off places, where, like those previously shed, they must produce good results.

T. R. J.