

president, and several of his notes on the minerals of Loire-Inférieure were published in the Bulletin of the Society. Other publications were 'Description des Minéraux de la Loire-Inférieure' (1885),¹ 'Le pays de Guérande : Minéralogie' (1908), 'Catalogue de la Collection de Minéralogie de la Loire-Inférieure' (1905). The mineral bertrandite, first found in the neighbourhood of Nantes, was discovered by him, and first described by É. Bertrand. His collection of local minerals he gave to the museum at Nantes, and his general collection to the museum at Rennes. In an obituary notice (Bull. Soc. franç. Min., 1910, vol. xxxiii, pp. 295-296) Professor A. Lacroix acknowledges the assistance he received from Baret when writing his 'Minéralogie de la France'.

WILLIAM PHIPPS BLAKE (1826-1910).

After graduating in 1852 at the Sheffield Scientific School of Yale University, Professor W. P. Blake undertook at various times the duties of works-chemist, geologist on explorations and railroad surveys, mining engineer, editor of the 'Mining Magazine', commissioner to the Paris, Vienna, and other exhibitions, &c. In 1861-3 he acted as mining engineer to the Japanese Government, and he was one of the first teachers of science in Japan. In 1864 he was appointed Professor of Mineralogy and Geology in the College of California, and in 1895 Professor of Geology and Mining and Director of the School of Mines in the University of Arizona at Tucson, from which post he retired in 1905. He was also State Mineralogist and Geologist of Arizona. He was the author of numerous reports and papers, many of the latter, published in the 'American Journal of Science', being on mineral occurrences in the western states. The Royal Society catalogue of scientific papers gives, between 1850 and 1888, sixty-eight titles under his name. The now well-known name clinocllore was given by him so long ago as 1851.

Biographical notices, together with portrait and bibliography, are given by R. W. Raymond (Trans. Amer. Inst. Mining Engin., 1911, vol. xli (1910), pp. 851-864; Bull. Geol. Soc. Amer., 1911, vol. xxii, pp. 36-47).

SAMUEL FRANKLIN EMMONS (1841-1911).

After graduating at Harvard University in 1861, Dr. S. F. Emmons studied at the Paris School of Mines (1862-4) and the Freiberg Mining Academy (1864-5). This training well fitted him for the important

¹ A second edition with the title 'Minéralogie de la Loire-Inférieure' appeared in Bull. Soc. Sci. Nat. de l'ouest de la France, Nantes, 1898, vol. viii, pp. 1-175, with 19 plates.

work which he subsequently did on the Geological Exploration of the Fortieth Parallel (1867-77), and, since 1879, on the United States Geological Survey. His work on economic geology and ore-deposits is well known, and his elaborate monograph on the Leadville district in Colorado, published in 1883-6, still remains a pattern for the methodical examination and description of an ore-bearing district.

FELIX FRANZ XAVER KREUTZ (1844-1910).

Dr. Felix Kreutz was born at Neu-Sandec in Galicia on November 19, 1844, and after studying at Lemberg, Cracow, and Vienna, was attached during 1867-8 to the Austrian Geological Survey. He was successively Professor of Mineralogy in the High School and the University at Lemberg, and the Jagellonian University at Cracow. From the last post he retired in 1908, his successor being Professor J. Morozewicz, to whom his son, Dr. Stefan Kreutz, is now an assistant. He was a member of the Polish Academy of Sciences, and for a time director of its mathematical and natural sciences section.

Dr. F. Kreutz was the author of several geological, petrographical, and mineralogical papers. Of the latter may be mentioned his work on the colour, fluorescence, and phosphorescence of rock-salt and fluor-spar, and their alteration under the influence of the cathode rays, sodium vapour, and changes of temperature.

Obituary notices by R. Zuber and J. Morozewicz are given (in Polish) in 'Kosmos' (Lemberg), 1910, vol. xxxv, pp. 883 and 888, with portrait.

OTTO PAUL LUEDECKE (1851-1910).

Since 1884 Dr. Otto Luedecke was Extraordinary Professor of Mineralogy in the University of Halle. He was previously (from 1874) assistant in the Mineralogical Institute, and since 1899 its director. He was the author of numerous papers on the crystallography of various minerals and organic compounds, most of which were published in the 'Zeitschrift für Naturwissenschaften', a journal edited by him from 1882 to 1892. He paid special attention to the minerals of the Harz, Thuringia, and the Prussian salt-deposits, and his excellent volume 'Die Minerale des Harzes' (1896) will long remain a standard work of reference. His successor at Halle is Dr. H. E. Boeke. (*See J. Walther, 'Leopoldina,' 1911, vol. xlvii, p. 16.*)