

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.)