

Geologic Section across the Piedmont Plateau in Maryland,"¹ were published during the year. A valuable paper by Mr. Keyes upon "Paleozoic Fossils of Maryland" was also published in the University Circulars.²

Further contributions were made by Professor Williams during this period upon the minerals of the state, and he also organized a geological excursion of the students of the University for a study of Appalachian geology, several days being spent in Allegany county during the month of May, 1891.

In 1891 a plan of co-operation was arranged by Professor Clark between the Johns Hopkins University, the Maryland Agricultural College, and the United States Weather Bureau for a study of the climatic conditions of the state of Maryland, and between May and November of that year monthly meteorological reports were published. The succeeding winter a bill was introduced into the General Assembly of Maryland requesting the official recognition of the bureau and the appropriation of \$2000 annually for its maintenance. This bill was passed in March, 1892, and received the signature of the Governor upon April 7 of the same year. This co-operation with the state has been maintained since that date, the headquarters of the Service, in accordance with the provisions of the bill, being permanently established at the Johns Hopkins University.

In February, 1892, the American Institute of Mining Engineers held their annual meeting in Baltimore, and under the editorial direction of Dr. Williams there was prepared a "Guide to Baltimore, with an Account of the Geology of its Environs and three Maps," in which the general distribution of the geological formations in the vicinity of Baltimore is described. An important investigation³ conducted by Dr. Williams during the early summer of 1892 was the determination of many of the rocks of the South Mountain district in Maryland and Pennsylvania to be of volcanic origin.

The importance of proper cartographic representation of the Balti-

¹ Bull. Geol. Soc. Amer., vol. ii, 1891, pp. 319-322.

² Johns Hopkins Univ. Circ. No. 94, vol. xi, 1891, pp. 28-29.

³ Amer. Jour. Sci., 3rd ser., vol. xlv, 1892, pp. 492-496.