

## NOTES AND NEWS

### THE OCCURRENCE OF GYPSUM CRYSTALS IN THE VIRGINIA EOCENE

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During the summer of 1930 studies were made on the Eocene formations lying between the Potomac and Rappahannock rivers in the vicinity of Fredericksburg, Virginia. The most interesting problem of a mineralogical nature is the occurrence of gypsum (selenite) crystals in the Nanjemoy formation of Upper Eocene age. The earliest reference in the literature to such an occurrence in Virginia is that of Rogers in 1834, mentioned in his reprint of 1884.<sup>1</sup>

Later, other references to the Virginia and Maryland occurrences were made by W. B. Clark, G. B. Shattuck and B. L. Miller.<sup>2</sup>

In all the references little is said in regard to the mode of occurrence or physical character of the crystals. The Nanjemoy formation consists of greensands, sands and clays. As far as has been observed the gypsum crystals are restricted to the lenses of clay. Their prevailing habit of occurrence is a rosette form, resembling pyramids or spires, radiating from a common center. In other words the crystals are mostly compound, though in a number of instances single crystals have been found. In many places where fresh surfaces of the clay were exposed, these clustered crystals were found at the intersections of one or two sets of joint planes with the bedding planes. Such an occurrence suggests their form to be due to growth starting at the intersection and extending outward along these several planes as directions of easiest growth.

<sup>1</sup> Rogers, W. B., *Geology of the Virginias*. D. Appleton and Co., New York, 1884, pp. 7, 17, 19, 26, 50, 52, 53, 56, 58, 60, 61, 127, 129, 141, 436, 437.

<sup>2</sup> Clark, W. B., The Eocene Deposits of the Middle Atlantic Slope in Delaware, Maryland and Virginia. *U. S. Geol. Survey, Bull.* 141, 1896, pp. 40, 43.

Clark, W. B., and others, Eocene of Maryland. *Md. Geol. Survey, Eocene Vol.*, 1901, pp. 64, 66, 69, 70.

Shattuck, G. B. and others, Description of the Patuxent Folio, Md.-D. C., *U. S. Geol. Survey, Geol. Atlas, Folio* 152, 1907, p. 6.

Clark, W. B. and others, Physiography and Geology of the Virginia Coastal Plain. *Va. Geol. Survey, Bull.* IV, 1912, p. 103.

Miller, B. L., Description of the Choptank Folio, Maryland. *U. S. Geol. Survey, Geol. Atlas, Folio*, 182, 1912, p. 3.

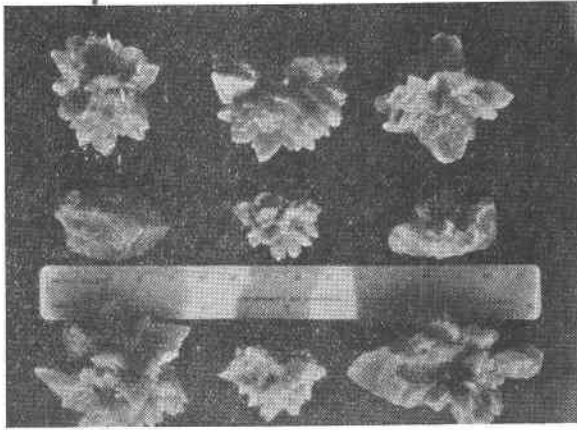


FIG. 1—Photograph showing cluster of gypsum crystals, and one single crystal to left side and middle row.

In size the clusters may vary from an inch or less, to as much as four inches in diameter. The clusters are usually about equidimensional and are made up of from five to twenty-five crystals arranged in such a way as to produce basin-like depressions with three to ten in each cluster. These depressions have been developed apparently by solution of the crystals and themselves radiate from a common center. In some cases there may be two or more prolonged growths.

The crystals vary in size from one-tenth of an inch to one inch in diameter. They are imperfectly formed with the prism and pinacoidal faces best developed. In the majority of cases they are truncated and frequently hollowed out. Small crystals often line the inner surfaces of the vug-like cavities and represent later crystallizations. The crystals are transparent to semitransparent, depending on the amount of inclusions present, and are colorless to gray.

In observing similar crystals in the Miocene, Rogers attributed their occurrence to permeating waters carrying sulphuric acid which resulted from the disintegration of sulphate of iron. This acid with the lime formed the sulphate of lime or gypsum.

The occurrence of this gypsum, as far as is known, is only of scientific interest.

## ATTENTION OF MINERAL COLLECTORS

The Mineralogical Society of America is attempting to compile a list of the more important mineral collections, both public and private, in the United States and Canada, the intention being to publish this information in the form of a regional directory in the *American Mineralogist*.

While the securing of the necessary data relating to the larger public collections housed in museums and other institutions presents little difficulty, the task of collecting information upon the smaller private collections, either general or specialized, that exist on this continent is more formidable. It is believed that there probably exists, in various smaller centers and mining districts, a wealth of interesting and valuable mineralogical material, some of it possibly collected years ago and from localities no longer accessible, which is virtually unknown to the scientific world. It is of decided value and interest to the owners of such material that the existence of their collections should be recorded, both from the standpoint of the possible scientific value of the material and with a view of enabling the owners to establish contacts with mineralogists who may find themselves in their districts and desire to examine the collections.

Accordingly, the Mineralogical Society of America wishes to ask all readers of this announcement who may be mineral collectors, and who own either general or specialized collections, to kindly send their names and addresses, together with a brief note on the nature of their material, to the address given below. If the collection is specially rich in minerals of a particular mine, locality or district, this should be mentioned, as should also the inclusion of any specialized types, such as gems, meteorites, or other notable rarities.

In the case of public collections, the name of the institution together with the name and address of the custodian or director, are desired.

In addition, the Society would welcome information, with notes as above, regarding other collections known to the correspondents, and which they consider should be included in the directory.

Details relating to collections consisting wholly of the minerals and ores of an individual mine, and on permanent exhibit at the mine office, will also be welcomed from mine owners, managers, superintendents, and engineers. The names and addresses of small local dealers specializing in the minerals of particular localities will also be of interest.

Since the success of the survey being made will very largely depend upon the cooperation of those individuals in possession of this information an earnest appeal is made for as full, complete and prompt replies as possible. Address all correspondence to *Samuel G. Gordon, Philadelphia Academy of Natural Sciences, Logan Square, Philadelphia, Pennsylvania.*