

is aware it has never been noted occurring under the conditions here described. It is found in crystal-tuffs and breccias having the mineralogical and chemical composition of trachyte. Its form and relation to the minerals with which it is associated lead to the belief that it is a *primary* constituent of these volcanics. In other words, the analcite has been deposited from showers of volcanic debris, simultaneously with the other materials, and was therefore a primary constituent of the partially consolidated magma which gave rise to these rocks. Its primary nature is further discussed in a later part of this paper, but it may be noted here that it was only during the past fifteen years that analcite has been recognized as a primary constituent of igneous rocks. Rosenbusch still regards it as a secondary mineral.

The fact that analcite is found in a crystal-tuff of the composition of a trachyte, is believed to establish a new rock type, and the name *Blairmorite*¹ is here suggested for it. This point is more fully discussed later on.

The rock specimens studied in this paper are nearly all from the museum of the Canadian Geological Survey. The collection was originally placed by Dr. A. E. Barlow of the survey, in the hands of Dr. C. W. Dickson, now of Queen's University, Kingston, for investigation, but as opportunity failed Dr. Dickson he very kindly placed the specimens in the writer's hands. The work was carried on in the geological laboratories of Columbia University, New York. To Professor Kemp and Dr. Berkey of Columbia University, the writer would express his acknowledgement for advice and assistance. The writer's thanks are, however, especially due to the authorities of the Geological Survey for the opportunity given him to study a suite of rocks which have proved to be of exceptional interest. Dr. Adams of McGill University, Montreal, added a few specimens to the collection, and also furnished some details of an interesting rock-cut on the Crows Nest branch of the Canadian Pacific Railway, four miles east of Crows Nest Lake.

1. The town of Blairmore is located on the Crows Nest branch of the Canadian Pacific Railway; it is less than two miles from some exposures of the volcanic rocks here described.