

ABSENCE OF PYRITE FROM CERTAIN ZEOLITE LOCALITIES

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HAS unmistakable pyrite been found at any of the zeolite localities about Paterson or Hopewell, New Jersey?

For several years past I have been devoting part of my time to the careful observation and study of the numerous mineral localities in the Triassic trap rocks. The well-known similarity of associations and modes of occurrence are of course strikingly obvious, altho there are enough exceptions to lend variety, as in the absence of some of the less common minerals from certain localities and their presence, or even abundance, at others. On the other hand some of the most common species are so constantly found that they are generally taken for granted and hence scarcely noticed. Calcite, quartz, and pyrite are good examples.

Two or three years ago, in connection with these studies of the zeolites (which are still unfinished) I tabulated the minerals of the various New Jersey localities and was greatly surprised to find that I had neither observed, nor found any published reference to, the occurrence of pyrite at the famous localities about Paterson. The record of New Jersey mineral localities that has been kept for many years by Mr. W. S. Valiant, Curator of the Rutgers College Geological Museum, also showed the same surprising absence. Since then a careful scrutiny of the Paterson material in the Rutgers museum and in several other extensive collections, together with repeated inquiries and visits to the quarries; have failed to supply the omission. At no other prominent zeolite locality in the state has this condition been found, with the probable exception of Hopewell, where I have not found pyrite, altho diligent search for it has not yet been made.

Chalcopyrite is universally present, even where pyrite fails. Apparently there was always enough copper at these exceptional localities during the period of mineralization to combine with the iron and sulfur in the double sulfide.